THE

ZOOLOGICAL RECORD

VOLUME THE FIFTY-FOURTH

BEING

RECORDS OF ZOOLOGICAL LITERATURE

RELATING CHIEFLY TO THE YEAR

1917

COMPILED FOR THE ZOOLOGICAL SOCIETY OF LONDON WITH ASSISTANCE FROM THE REGIONAL BUREAUS OF THE INTERNATIONAL CATALOGUE, BY

D. SHARP, H. M. WOODCOCK, F. W. EDWARDS, M. CONNOLLY, J. S. DUNKERLY, W. T. CALMAN, C. T. REGAN, W. L. SCLATER, AND M. HINTON

SUPERINTENDED BY

DAVID SHARP, M.A., F.R.S., F.Z.S., &c.

Explorate solum: sic fit via certior ultrà.

LONDON:
PRINTED FOR THE SOCIETY;
SOLD AT THEIR HOUSE IN REGENT'S PARK
M.DCCCCXIX.

Papers and Memoirs intended for this work should be addressed to "THE EDITOR of the Zoological Record, Zoological Society, Regent's Park, London, N.W. 8." It is earnestly requested that in the case of separately-printed copies of papers so forwarded, the *original pagination* may be indicated.

EXPLANATORY.

This Volume is printed in the Divisions enumerated on p. iv.

The pagination of each Division is separate, and is given at th left-hand top corner of the pages. The number and name of the Division is given as a heading on each left-hand page. The Registration Numbers when of importance are given at the right-hand top corner of the right-hand pages. The date 1917 corresponding to the bulk of the literature indexed is given at the right-hand top corner of the left-hand page.

In the Subject Index of each Division authors are quoted by name only. The full references will be found in the Title Section of the Division.

The Literature indexed is mainly that of 1917 but includes entries for earlier years that have been received too late for inclusion in previous volumes.

On account of the international situation, the Royal Society of London found itself unable to undertake at present any financial responsibility for any volumes of the International Catalogue subsequent to those of the Fourteenth Annual Issue.

Under these circumstances the Zoological Society of London arranged to undertake the issue of the present volume, which is the fifty-fourth of the Zoological Record, and would have been N. Zoology of the Seventeenth Annual Issue of the International Catalogue. Its preparation has been conducted as closely as possible on the model of the previous volumes prepared jointly by the International Catalogue and the Zoological Society.

It can now be purchased from the Zoological Society of London at the price of £2, either in the binding of the Zoological Record or in series with the International Catalogue.

Volume 55, dealing with the Literature of 1918, is in preparation.

CONTENTS.

I. COMPREHENSIVE AND GENERAL ZOOLOGY

II. PROTOZOA.

III. PORIFERA OR SPONGIAE.

IV. COELENTERATA.

V. ECHINODERMATA.

VI. VERMIDEA: including GEPHYREA AND PTEROBRANCHIATA.

VII. BRACHIOPODA AND BRYOZOA OR POLYZOA.

VIII. MOLLUSCA.

IX. ARTHROPODA (GENERAL).

X. CRUSTACEA.

XI. ARACHNIDA AND MYRIOPODA; including also GIGANTOSTRACA, EURYPTERIDA, PROTOTRACHEATA.

XII. INSECTA.

XIII. PROCHORDATA = TUNICATA, CEPHALOCHORDATA, ENTEROPNEUSTA.

XIV. VERTEBRATA (GENERAL).

XV. PISCES.

XVI. REPTILIA AND BATRACHIA.

XVII. AVES.

XVIII. MAMMALIA.

ALPHABETICAL INDEX OF NEW NAMES OF GENERA AND SUBGENERA.

I. COMPREHENSIVE ZOOLOGY

ARRANGED BY

D. SHARP

This section includes works that deal with more than one branch of Zoology, or that are of general interest to Zoologists. It is, therefore, not complete in itself as regards any one subject included in it. The special records complete each subject. A few memoirs included in the special records are repeated in this division.

CONTENTS

PAGE

I. TITLES 4

II. SUBJECT-INDEX :—

Hyperzoology :—

Philosophical=0000 10

Historical=0010 :

Biography, Obituary notices 10

Reports=0020 (vacant)

General Treatises, Text-books=0030 10

Bibliography=0032 10

Addresses, Lectures, &c.=0040 (vacant)

Pedagogy=0050 (vacant)

Institutions, Museums, Economic=0060 10

Nomenclature=0070 10

Methods, Technique=0090 11

Morphology=0207— PAGE

General, Miscellaneous 11
Nervous System 11

Physiology=0211—

General 11
Cytological. Protoplasm and cell 11
Sex 11
Metabolic (vacant)
Function 11
Environment, Adaptation 11
Vitality, Senescence, Death 11
Chemical 11

Development=0215—

General 11
Ovum, oogenesis (vacant)
Spermatozoon, spermatogenesis 11
Fertilization 11
Parthenogenesis 11
Embryology. Metamorphosis 11
Regeneration 11

Ethology=0219—

General 11
Phenology (vacant)
Migration (vacant)
Food-habits (vacant)
Parental (vacant)
Sexual (vacant)
Social 11
Luminosity 11
Parasitism 11
Voice (vacant)
Habitat, incl. Speleology 11
Oceanic, Plankton general 11
Psychology, Tropisms 11

Aetiology and Variation=0223—

General 12
Variation, Mutation.. 12
Teratology } (vacant)
Hybrids }
Telegony 12
Heredity 12
Evolution. Origin of species 12
Phylogeny (vacant)

PAGE

Geography=0227—
General 12
Faunae:—
Ocean 12
Europe and Mediterranean 12
Asia, Malay Archipelago 12
Africa 12
North America 12
South America, etc. 12
Australasia 12
Arctic 12

Taxonomy (or Systematic)=0231 12

I.—TITLES.

Abbott, J. F. Mimicry in the genus *Limenitis* with special reference to the "Poulton hypothesis." St. Louis Mo. Washington Univ. Stud. **1** (Pt. 1) 1914 (203–221) pl. xxxvii. **1**

Abendanon, E. C. *vide* Dollfus, G. F.

Adelung, N. Bibliography of russian zoological literature, 1917. Rev. zool. russe Moscou **2** 1917 (56–64 etc.). **2**

Agassiz, A. and **Whitman,** C. O. The development of osseous fishes. 2. The pre-embryonic stages of development. Part 2.—The history of the egg: cleavage, formation of the periblast, and development of the germ ring. Boston, Mem. Mus. Comp. Zool. Harvard Coll. **40** 1915 (429–434) pls. xxxii–xlii. **3**

Alm, G. Faunistische und biologische Untersuchungen im See und Gälmaren (Mittelschweden). Ark. Zool. Stockholm, **10,** No. 18, 1916 (47) 10 text figs. **4**

Atkins, W. R. G. Osmotic pressure in animals and plants. Sci. Progress London **11** 1917 (562–577). **5**

Benders, A. De continuiteit van het kiemplasma. [La continuité du plasma germinatif.] Psychiatrische neurologische Bladen, Amsterdam, **1917** (406–423). **6**

Blanc, H. Drague et nasse pour la capture des animaux du fond des lacs. Lausanne, Bul. Soc. Sci. Nat. **40** 1913 (1915) (287-290) 2 figs. **7**

Bloch, J. Die naturhistorische Abteilung des Museums der Stadt Solothurn. Erste Sektion: Zoologische und ethnographische Sammlung. Solothurn, Mitt. Natf. Ges. **5** (xvii. Bericht) 1911–1914 (1914) (1–53) 6 taf. **8**

Boas, J. E. V. Zur Auffassung der Verwandtschaftsverhältnisse der Tiere. I. Kopenhagen, Aug. Bang, 1917, (62) with 35 figg. 26 x 17 cm. Price Kr. 3,00. **9**

Boeke, J. Studien zur Nervenregeneration. ii. Verh. Ak. Amsterdam Sect. 2 **19** No. 5 1917 (1–71) 6 pls. **10**

Bohn, G. Sur quelques préjugés biologiques. C. R. Soc. Biol. Paris **80** 1917 (613–616). **11**

Borner, L. Faunistische Notizen vom Statzersee im Oberengadin. Jahresber. Ges. Graubünden Chur **57** 1917 (55-64). **12**

Brumfiel, D. M. Macroscopic fauna of a small brook. [Iowa City, Iowa.] Des Moines Proc. Iowa Acad. Sci. **22** 1915 (363–374, with table, pl.). **13**

Buytendyk, F. Instinct en leven. [L'instinct et la vie.] Orgaan Christelyke Vereeniging Natuur-en geneeskundigen. Kampen **1** 1928 (1–38). **14**

Calvert, A. S. and **Calvert,** P. P. A year of Costa Rican Natural History. New York 1917 (xix + 577) maps and illustr. **15**

Carracido, J. R. Los fundamentos de la bioquímica. Bol. Soc. espan. Madrid **17** 1917 (154–166). **16**

Clarke, W. E. Wild life in a Highland deer forest. Scott. Natural. Edinburgh **1917** 1917 (255–264, 279–288). **17**

Clausen, R. E. *vide* Goodspeed and Clausen.

Conklin, E. G. The share of egg and sperm in heredity. Proc. nation. Ac. Washington **3** 1917 (101–105). **18**

Cook, O. F. The existence of species. J. Hered. Washington **5** 1914 (155–158). **20**

Cowdry, N. H. A comparison of mitochondria in plant and animal cells. Biol. Bull. Woods Hole **23** 1917 (196–228). **21**

Dahl, F. Die Benennung der Tiere. Zool. Anz. Leipzig **49** 1917 (205–213). **22**

Dall, W. H. A monograph of the molluscan fauna of the *Orthaulax pugnax* zone of the Oligocene of Tampa, Florida. Washington Smithsonian Inst. U.S. Nation. Mus. Bull. No. **90** 1915 (i–xv 1–173) pls. i–xxvi. **23**

Danchakoff, V. Differentiation by segregation and environment in the developing organism. Amer. Nat. New York **51** 1917 (419–428). **24**

Darbishire, A. D. An introduction to biology and other papers. London 1917 (xviii+291). **25**

Delsman, H. C. De eiklieving van *Volvox globator* en hare verhouding tot de voortbeweging van den volwassen vorm en tot de klievingstypen der Metazoa. [The egg-cleavage of *Volvox globator* and its relation to the movement of the adult form and to the cleavage types of Metazoa]. Amsterdam Versl. Wis. Nat. Afd. K. Akad. Wet. **27** [1918] (137–145) 16 Text figs. (Dutch); Amsterdam Proc. Sci. K. Akad. Wet. **21** [1918] (243–251) 16 figs. (English). **26**

Diener, Carl. Die marinen Reiche der Triasperiode. Denkschr. K. Ak. Wiss. Wien **92** 1916 (405–549) 1 karte. **27**

Dollfus, G. F. Paléontologie du voyage à l'île Célébes de M. E. C. Abendanon. E. C. Abendanon. Geologische en geografische doorkruisingen van Midden-Celebes. Leiden (E. J. Brill) Vol. 3 1917 (959–1016, 4 Taf.) 28 cm. **28**

Droogleever Fortuyn, Ae. B. Eenige beschouwingen over de evolutie van het zenuwstelsel. [Quelques considérations sur l'évolution du système nerveux.] Handl. Ned. Nat. Geneesk. Congres **16** 1918 (294–303). **29**

Droogleever Fortuyn, A. Het phylogenetisch optstaan van eenige gangliënceltypen. [Das phylogenetische Entstehen einiger Ganglienzellentypen.] Amsterdam Werk. Gen. Nat. Genees. Heelk. **8** 1917 (634–636). **30**

Dubois, R. À propos de quelques recherches récentes de M. Newton Harvey sur la biophotogénèse et du rôle important de la préluciférine. C. R. Soc. Biol. Paris **80** 1917 (964–966). **31**

Duncan, F. M. Some methods of preserving biological specimens. J. R. microsc. Soc. London **1917** 1917 (521–529). **32**

Dunn, L. C. Nucleus and cytoplasm as vehicles of heredity. Amer. Nat. New York **51** 1917 (286–306). **33**

Ealand, A. *vide* Heron-Allen and Ealand.

Faust, E. C. *vide* Zeleny, C.

Fehlmann, J. W. Die Bedeutung des Sauerstoffes für die aquatile Fauna. Vierteljahrschr. Ges. Zurich **62** 1917 (230–241). **34**

Floderus, B. Bidrag till extremitetskelettets embryolagi [Beitrag zur Embryologie des Extremitätenskeletes.] Stockholm Sv. Läkares Handl. **42** 1916 (427–441; deutsches Res. 440–441) 1 pl. **35**

Fuente, J. M. de la. Enumeración de las especies zoológicas que han sido descritas por primera vez sobre ejemplares procedentes de la provincia de Ciudad real. Bol. Soc. españ. Madrid **17** 1917 (277–311). **36**

Garrey, W. E. Proof of the muscle theory of heliotropism. Proc. nation. Ac. Washington **3** 1917 (602–609). **37**

Garrey, W. E. Some cryoscopic and osmotic data. Biol. Bull. Woods Hole Mass. **28** 1915 (77–86) tables. **38**

Gates, R. R. The mutation theory and the species-concept. Amer. Nat. New York **51** 1917 (577–595). **39**

Giordina, A. Sulla tensione superficiale della cellula durante la mitosi. Monit. Zool. ital. **28** 1917 (21–24). **40**

Girty, G. H. The fauna of the Batesville sandstone of northern Arkansas. Washington Dept. Int. U.S. Geol. Surv. Bull. No. **593** (1915) (1–170) pls. i–xi. **41**

Girty, G. H. Fauna of the so-called Boone chert near Batesville, Arkansas. Washington Dept. Int. U.S. Geol. Surv. Bull. No. **595** 1915 (1–45) pls. i–ii. **42**

Girty, G. H. Faunas of the Boone limestone at St. Joe, Arkansas. Washington Dept. Int. U.S. Geol. Surv. Bull. No. **598** 1915 (1–50) pls. i–iii. **43**

Goodspeed, C. H. and **Clausen,** R. E. Mendelian factor differences versus reaction system contrasts in heredity. Amer. Nat. New York **51** 1917 (31–46). ii. T.c. (92–101). **44**

Gravier, C. La faune pélagique de Messine et l'institut central de biologie marine. Bull. Soc. philomat. Paris **9** 1917 (83-88). **45**

Gregory, W. K. Genetics versus palæontology, Amer. Nat. New York **57** 1917 (622-635). **46**

Grinnell, J. Field tests of theories cocerning distributional control. Amer. Nat. New York **51** 1917 (115-128). **47**

Gunther, R. T. Report on agricultural damage by vermin and birds in the counties of Norfolk and Oxfordshire in 1916. Oxford 1917 (92 pp.). **48**

Haas, F. Consideraciones sobre los medios y fines de la investigación zoogeográfica. Mus. Barcin. Op. Zool. Barcelona **6** 1917 (1-58). **49**

Harvey, E. N. The mechanism of light production in animals. Science New York **44** 1916 (208-209). **50**

Hecker, F. A new model of double pipet holder and the technic for the isolation of living organisms. J. Infect. Dis. **19** Chicago 1916 (306-314) figs. **51**

Henseler, H. Untersuchungen über den Einfluss der Ernährung auf die morphologische und physiologische Gestaltung des Tierkörpers. Tl 2 Forts. aus Bd III. Kühn-Arch. Berlin **5** 1914, (207-288). **52**

Herlant, M. Le mécanisme de la parthénogenèse experimentale chez les amphibiens et les echinodermes. Bull. Sci. France Belgique Paris **50** 1917 (381-424). **53**

Heron-Allen, E. and **Ealand,** A. Alcide d'Orbigny, his life and work. J. R. microsc. Soc. London **1917** 1917 (2-105) portrait. **54**

Herwerden, Marianna van. Comment on Miss Beckwith's paper on "The genesis of the plasma-structure in *Hydractinia echinata.*" [With reply by Cora Jipson Beckwith.] J. Morph. Philadelphia **26** 1915 (387-389). **55**

Herwerden, M. van. Onderzoekingen omtrent de bepaling en overerving van het geslacht. [Untersuchungen über Bestimmung und Vererbung des Geschlechts.] Amsterdam, Werk. Gen. Nat. Genees. Heelk. **8** 1917 (519-532). **56**

Hilton, W. A. Some comparisons between neuclei of nerve cells. Trans. Amer. Micr. Soc. **36** 1917 (157-161). **57**

Hoge, Mildred A. The influence of temperature on the development of a Mendelian character. J. Exp. Zool. Philadelphia **18** 1915 (241-297) with ff. pls. tables. **58**

Holmes, S. J. Unit characters. J. Hered. Washington **6** 1915 (473-476). **59**

Ihle, J. E. W. Mededeeling over enkele parasieten der husdieren in Nederland. [Mitteilung über einige Parasiten der Haustiere in den Niederlanden.] Helder, Tydschr. Ned. Dierk. Ver. **16** (Ser. 2), 1918 (lx-lxi). **60**

Jennings, S. Life and matter from the standpoint of radically experimental analysis. Baltimore. Johns Hopkins Univ. Cir. (N. Ser.) **1914** No. 10 (No. **270**). (3-20). **61**

Jensen, Ad. S. Quaternary fossils collected by the Denmark Expedition (to the north-east coast of Greenland 1906-08). København, Medd. Grønl. **43** no. 21 1917 (619-632). **62**

Jensen, Ad. S. Mindeord om Dansk Naturhistorisk Forenings afdøde Formand Professor. Dr. phil. Hector Jungersen. Memorial address on the zoologist Hector Jungersen in the Danish Society of Natural History. København, Nath. Medd. **68** 1917 (v-xxi) with 1 portr. **63**

Johannsen, W. Aristoteles' og Hippokrates' idéer om Arvelighed, set i Nutidsforskinngens Lys. Pop. Naturv. Revy Stockholm, **6** 1916 (125-136) 1 text fig. **64**

Jordan, H. Mededeeling over spieren van dieren, die op "holle organen" gelyken. [Mitteilung über Muskeln von Tieren, welche höhlen Organen ähneln]. Helder, Tydschr. Ned. Dierk. Ver. **16** (2), 1917 (iv-vii). **65**

Jordan, H. De handelingen van lagere dieren. [Die Handlungen der niederen Tiere.] Amsterdam, Werk. Gen. Nat. Genees. Heelk. **8** 1917 (489-492). **66**

Jordan, H. J. und **Lam,** H. J. Ueber die Darmdurchlässigkeit bei *Astacus fluviatilis* und *Helix pomotia.* Helder Tydschr. Ned. Dierk. Ver. (2) **16** 1918 (281-292). **67**

Kampen, P. N. **van.** Het individu in het dierenryk. [L'individu dans le règne animal.] Amsterdam (P. N. van Kampen & Zoon) 1917 (34) 23 cm. **68**

Kroman, K. Laws of muscular action. Køpenhavn, Kgl. Danske Vidsk. Selsk. Biologiske Meddelelser **1** 1917 (1–42) **69**

Lacroix, A. Le Naturaliste Bory de Saint Vincent. Rev. scient. Paris **55** 1917 (225–236). **70**

Lam, H. *vide* Jordan, H. J.

Lillie, R. S. The formation of structures resembling organic growths by means of electrolytic local action in metals, and the general physiological significance and control of this type of action. Biol. Bull. Woods Hole **33** 1917 (135–186). **71**

Lind, J., **Rostrup**, Sofie and **Rayn**, F. K. Oversight over Landbrugsplanternes Sygdomme i 1916. Attacks of parasites on the agricultural plants in Denmark in the year 1916. København Tids. Planteavl **24** 1917 (229–254). **72**

Lock, R. H. Recent progress in the study of variation, heredity and evolution; revised by L. **Doncaster**. London 1916 (xxiv+336). **73**

Loeb, J. The organism as a whole. New York and London 1916 (x+379). **74**

Loeb, J. The mechanistic conception of life: Biological essays. Chicago (University of Chicago press) 1912 (5 p. 1+232) figs. tables 22.5 cm. **75**

Loeb, J. Cluster formation of spermatozoa caused by specific substances from eggs. J. Exp. Zool. Philadelphia **17** 1914 (123–140). **76**

Loeb, J. and **Northrop**, J. H. What determines the duration of life in Metazoa? Proc. nation. Ac. Washington **3** 1917 (382–386). **77**

Loeb, J. and **Northrop**, J. H. Heliotropic animals as photometers on the basis of the validity of the Bunsen-Roscoe law for heliotropic reactions. Proc. Nat. Ac. Sci. Washington **3** 1917 (539–544). **78**

Loeb, J. and **Wasteneys**, H. On the identity of heliotropism in animals and plants. Washington, Proc. Nation. Acad. Sci. **1** 1915 (44–47) table. **79**

Loeb, J. and **Wasteneys**, H. The relative efficiency of various parts of the spectrum for the heliotropic reactions of animals and plants. J. Exp. Zool. Philadelphia **19** 1915 (23–35) tables. **80**

Longley, W. H. Studies upon the biological significance of animal coloration. Amer. Nat. New York **51** 1917 (257–285). **81**

Lotsy, J. P. La quintessence de la théorie du croisement. Arch. Néerland. 3 B **3** 1917 (351–353). **82**

Loveridge, A. Natural history notes from British East Africa. J. E. Africa Soc. **6** 1917 (170–185). **83**

Lull, R. S. Organic evolution. New York 1917 (xviii + 729) 30 pls. **84**

Lull, R. S. Triassic life of the Connecticut valley. Connecticut Geol. Nat. Hist. Surv. Bull. Hartford No. **24** 1915 (1–285) pls. i–xii; ff. 1–126; table; map. **85**

Lundblad, O. Om några i Sverige till sin utbredning mindre kända lakustrina evertebrater. Fanna och Flora Uppsala **12** 1917 (129–136; correction 288). **86**

MacBride, E. W. Are acquired characters inherited? South Eastern Nat. London **1917** (38–52). **87**

MacBride, E. W. Presidential address. Rep. Brit. Ass. London **1916** 1917 (403–417). **88**

McEwen, G. F. Summary and interpretation of the hydrographic observations made by the Scripps institution for biological research of the University of California 1908 to 1915. Berkeley Univ. Cal. Publ. Zool. **15** No. 3 1916 (256–280) maps and charts. **89**

McEwen, E. F. *vide* Michael and McEwen.

McMurrich, J. P. Fifty years of Canadian Zoology. Trans. R. Soc. Canada **11** 1917, sect. 4 (1–14). **90**

Maluquer, J. Instruccions per a la recollecció, preparació i conservació d' animals marins. Mus. Barcin. Op. oceanogr. Barcelona **1** 1917 (1–55) 3 pls. **91**

Martin, K. Over zoogenaamd oligocene versteeningen van Celebes. [On some fossils from Celebes, believed to belong to the oligocene.] Amsterdam Versl. Wis. Nat. Afd. K. Akad. Wet. **26** [1917] (145–151) (Dutch); Amsterdam. Proc. Sci. K. Akad. Wet. **20** 1918 (793–799) (English). **92**

Martin, K. Over de miocene fauna van het West-Progo gebergte op Java. [On the miocene fauna of the West-Progo Mountains in Java.] Amsterdam Versl. Wis. Nat. Afd. K. Akad. Wet. **26** [1917] (139–144) (Dutch); Amsterdam Proc. Sci. K. Akad. Wet. **20** 1918 (800–804) (English). **93**

Mayer, A. G. The effects of temperature upon tropical marine animals. Pap. Tortugas Lab. Washington 1914 (3–24). **94**

Metz, C. W. and **Bridges,** C. B. Incompatibility of mutant races in *Drosophila*. Proc. nation. Ac. Washington **3** 1917 (673–678). [*Diptera.*] **95**

Meyer, A. Die biologische Bedeutung der Nucleolen. Zool. Anz. Leipzig **49** 1917 (309–314). **96**

Michael, E. L. and **McEwen,** G. F. Continuation of hydrographic, plankton and dredging records. Berkeley Univ. Cal. Publ. zool. **15** No. 2 1916 (207–254). **97**

Minozzi, C. Contributo allo studio della speleologia italiana. La grotta di S. Maria M. sul monte Vallestra (Reggio E.). Bull. Soc. ent. ital. Firenze **48** 1917 (164–174). **98**

Morgan, T. H. A critique of the theory of evolution. Princeton 1916 (x + 197). **99**

Morgan, T. H. Localization of the hereditary material in the germ cells. Washington, Proc. Nation. Acad. Sci. **1** 1915 (420–429) figs. **100**

Morgan, T. H. The theory of the gene. Amer. Nat. New York **51** 1917 (513–544). **101**

Neiva, A. and **Penna,** B. Viajem cientifica pelo norte da Bahia, sudoeste de Pernambuco, sul do Piauhi e de norte a sul de Goiaz. Mem. Inst. Oswaldo Cruz Rio de Janeiro **8** 1916 (74–224) 8 pls. map. **102**

Nielsen, K. B. Cerithiumkalken i Stevns Klint. The fossils of the cretaceous deposits called "Ceritkalk" in Stevns Klint (Sealand). København, Medd. Geol. **5**, **7**, 1917 (1–14) with 3 figs. **103**

Northrop, J. H. *vide* Loeb and Northrop.

Ogilvie-Grant, W. R. and others. Reports on the collections made by the British ornithologists' union expedition in Dutch New Guinea 1910–13. Vols. 1 and 2. London 1916. [Partly reprints and partly original.] **104**

Osborn, H. F. Application of the laws of action, reaction and interaction in life evolution. Proc. nation. Ac. Washington **3** 1917 (7–9). **105**

Ostenfeld, C. H. Conseil permanent international pour l'exploration de la mer. Publications de circonstance nr. **70**: Catalogue des espèces de plantes et d'animaux observées dans le plankton recueilli pendant les expéditions depuis les mois de juillet 1908 jusqu'au mois de décembre 1911. Publié par le bureau et redigé par C. H. Ostenfeld. Copenhague, Høst & fils 1916 pp. 96 25½ × 17 cm. Price Kr. 1,50. **105A**

Painter, T. S. An experimental study in cleavage. J. Exp. Zool. Philadelphia **18** 1915 (299–323) pls. **106**

Pearl, R. The selection problem. Amer. Nat. New York **51** 1917 (65–91). **107**

Pearl, R. Studies on inbreeding, vii. Some further considerations regarding the measurement of degrees of kinship. Amer. Nat. New York **51** 1917 (545–559). **108**

Pearl, R. Studies on inbreeding viii. A single numerical measure of the total amount of inbreeding. Amer. Nat. New York **51** 1917 (636–639). **109**

Pearl, R. and **Miner,** J. R. Tables for calculating coefficients of inbreeding. Agric. Exp. Sta. Maine Orono Bull. No. **218** 1913 (191–202). **110**

Penna, B. *vide* Neiva and Penna.

[**Petrov,** V. A.] Петровъ, В. А. О происхожденія пола потомства (чаеть вторая). [Ueber die Entstehung des Geschlechtes bei der Nachkommenschaft. (Zweiter Teil.)] Saratov Ann. Univ. **5** livr. 2 1914 (139–183). **111**

Petrunkevitch, A. Morphology of the invertebrate types. New York 1916 (xiii + 263). **112**

Pilette, A. A travers l'Afrique équatoriale. Bruxelles 1914 (473 pp.) illustr. maps. **113**

Plimmer, H. G. Report on the deaths which occurred in the zoological gardens during 1916, together with a list of the blood-parasites found during the year. London Proc. zool. Soc. **1917** 1917 (27–35). **114**

Purdy, W. G. Potomac plankton and environmental factors. In: CUMMING, HUGH S. Investigation of the pollution and sanitary condition of the Potomac watershed. Washington, Treas. Dept. U.S. Publ. Hlth. Serv. Hyg. Lab. Bull. No. **104** 1916 (130–191) ff. 16–53. **115**

Rabaud, E. Les grandes lignes d'une théorie physiologique de l'hérédité. C. R. Soc. Biol. Paris **80** 1917 (738–744). **116**

Rabaud, E. Essai sur la vie et la mort des espèces. Bull. Sci. France Belg. Paris **50** 1917 (287–380). **117**

Rabaud, E. Telegony. J. Hered. Washington **5** 1914 (389–399) tables. **118**

Ravn, F. K. *vide* Lind, J.

Retterer, E. and **Neuville**, H. Appréciation des caractères anatomiques au point de vue de la clasification. C. R. Soc. Biol. Paris **80** 1917 (607–611). **119**

Retterer, E. and **Neuville**, H. De l'organisation et de la classification. (Seconde réponse à M. Trouessart.) C. R. Soc. Biol. Paris **80** 1917 (798–800). **120**

Retzius, G. Till kännedomen om neuroglian hos lägre vertebrater. [Zur Kenntnis der Neuroglia bei den niederen Vertebraten.] Stockholm Sv. Läkares. Handl. **42** 1916 (1257–1272 deutsches Resumé 1272) 6 text figs. **121**

Richards, A. Experiments on X-radiation as the cause of permeability changes. Amer. J. Physiol. Baltimore **36** 1915 (400–417). **122**

Richards, A. and **Woodward**, A. E. Note on the effect of X-radiation on fertilizing. Biol. Bull. Woods Hole Mass. **28** 1915 (140–147) pls. i–iv. **123**

Riddle, O. The theory of sex as stated in terms of results of studies on pigeons. Science New York **46** 1917 (19–24). **124**

Riel, J. A. van. Erfelykheidsleer. [La doctrine de l'hérédité.] Zutphen (W. J. Thieme & Cie) 1917 (67) 23 cm. **125**

Rikli, M. Natur- und Kulturbilder aus den Kaukasusländern und Hocharmenien von Teilnehmern der schweizerischen naturwissenschaftlichen Studienreise Sommer 1912. Zürich (Orell Füssli) 1914 (viii + 317) 95 Illustr. 3 Karten 23 cm. **126**

Rioja, E. Notas sobre una excursión por las costas de Gihón. Bol. Soc. españ. Madrid **17** 1917 (488–494). **127**

Rostrup, Sofie *vide* Lind, J.

Saguchi, S. Studies on ciliated cells. J. Morphol. Philadelphia **29** 1917 (217–271) 4 pls. **128**

Scharff, R. S. Advances in Irish marine zoology. Irish. Nat. Dublin **27** 1917 (105–113). **129**

Serre, P. Le Musée Goeldi, au Para. Bull. Mus. Paris **1916** 1917 (351–356). **130**

Sewertzoff, A. N. On the factors which determine the duration of the life of multicellular animals. Rev. zool. russe Moscou **2** 1917 (65–72). **131**

Sharp, D. and others. The Zoological Record, Volume the fifty-second. 1915. London Zoological Society, 1917. **131A**

Shelford, R. [the late]. A naturalist in Borneo: Edited by E. B. Poulton. London 1917 (xxviii + 331) 32 pls. **132**

Silvestri, F. Contribuzione alla conoscenza dei Termitidi e Termitofili dell' Africa occidentale. Boll. Lab. Portici **12** 1917 (287–346). **133**

Thompson, D'A. W. On growth and form. Cambridge 1917 8vo (xvi + 793). **134**

Thomson, J. A. The study of animal life (4th ed. revised). London 1917 (xvi + 477). **135**

Tillett, B. C. Mimicry—some of Nature's strategems. Ottawa Nat. **29** Ottawa 1915-16 (74–76). **136**

Trouessart, E. L. Les rapports de l'anatomie et de la zoologie. C. R. Soc. biol. Paris **80** 1917 (527–529) also (611–613). **137**

Trouessart, E. La véritable opinion de Pouchet sur la subordination des caractères en zoologie. (Troisième réponse à M. Retterer). C. R. Soc. Biol. Paris **80** 1917 (807–808 and 894). **138**

Van Cleave, H. J. Factors concerned in the production of mitosis in organisms displaying cell constancy. Biol. Bull. Woods Hole Mass. **29** 1915 (33–40). **139**

Van Deventer, W. Handboek ten dienste van de Suikerriet-cultur. Tweede deel. De dierlijke Vijanden van het suikerriet en hunne parasiten. Amsterdam 1912 (308 + xii) 43 pls. **140**

Vermeulen, H. A. Over de inwendige afscheidingen der geslachtsklieren en de erfelykheidsleer. [Sur les sécrétions internes des glandes génitales et la doctrine de l'hérédité.] Tydschr. Diergeneesk. Utrecht **44** 1917 (681–691). **141**

Vorhies, C. T. Notes on the fauna of Great Salt Lake. Amer. Nat. New York **51** 1917 (494–499). **142**

Wahlgren, E. Det öländska alvarets djurvärld, ii. Ark. Zool. Stockholm **11** No. 1 1917 (130). **143**

Waite, E. R. and others. Results of the South Australian Museum expedition to Strzelecki and Cooper creeks. Trans. R. Soc. S. Austral. Adelaide **41** 1917 (405–658) pls. xxi–xliii. **144**

Wasteneys, H. *vide* Loeb, J.

Watson, D. M. S. The evolution of the tetrapod shoulder girdle and forelimb. J. Anat. London **52** 1917 (1–63). **145**

Whitman, C. O. *vide* Agassiz and Whitman.

Wichmann, Carl Ernst. A. Bericht über eine im Jahre 1903 ausgeführte Reise nach Neu-Guinea. Nova Guinea, Resultats de l'expédition scientifique Néerlandaise a la Nouvelle-Guinée en 1903 sous les auspices de Arthur Wichmann, vol. iv, Leiden (E. J. Brill) 1917 (1–493, 8 Taf. 171 Fig. 3 Kart. **146**

Wilson, H. V. The nature of the individual in the animal kingdom. J. Elisha Mitchell Soc. Raleigh **32** 1917 (125–142). **147**

Wilson, J. A manual of mendelism. London 1916 (152 pp.). **148**

Wintrebert, P. Sur les principes d'une méthode de sériation embryonnaire. C. R. Soc. Biol. Paris **80** 1917 (532–535). **149**

Woodward, A. E. *v.* Richards, A.

Yerkes, R. M. and **Yerkes,** Ada W. Individuality, temperament, and genius in animals. Amer. Mus. J. New York **17** 1917 (235–243). **150**

Zanolli, V. La memoria organica nelle teorie di R. Semon. Atti Acc. Ven.-trent. Padova **8** 1916 (3–53). **151**

Zeleny, C. and **Faust,** E. C. Size dimorphism in the spermatozoa from single testes. J. Exp. Zool. Philadelphia **18** 1915 (187–240) figs. tables. **152**

Zschokke, F. L'histoire de la faune suisse depuis l'époque glaciaire. Le Globe Génève **56** 1917 Mém. (1–31). **153**

Zschokke, F. Die Tierwelt der Umgebung von Basel nach neueren Forschungen. Verh. Ges. Basel **28** 1917 (28–65). **154**

II.—SUBJECT INDEX.

The author's name and the number refer to Titles, where the full reference will be found.

HYPERZOOLOGY.

Philosophical. 0000

Cook, 20; **Jennings, 61**; **Kampen, 68**; **Loeb, J. 75**; The individual, **Wilson, 147.**

History, Biography. 0010

A. d'Orbigny, **Heron-Allen** and **Ealand, 54**; Jungersen, **Jensen, 63**; Bory de Saint-Vincent, **Lacroix, 70.**

General Works. 0030

Lock, 73; Natur und Kulturbilder aus den Kaukasusländern und Hocharmenien, **Rikli, 126**; A naturalist in Borneo, Shelford, **132**; **Thomson, 135.**

Bibliography. 0032

Russian Bibl. **Adelung, 2**; Zoological Record for 1915, **Sharp** and others, **131a.**

Institutions, Museums, Economics. 0060

Museums.

Bloch, 8; **Gravien, 45**; **Serre, 130.**

Economics.

Gunther, 48; **Lind, Rostrup** and **Ravn, 72**; **Plimmer,** disease, **114**; **Van Deventer, 140.**

Nomenclature. 0070

Dahl, 22.

Methods, Technique. 0090

Drague et nasse, **Blanc, 7**; Arrangement of Laboratories, **Bohn, 11**; Preservation, **Duncan, 32**; **Maluquer, 91**;

The isolation of living organisms, **Hecker, 51.**

MORPHOLOGY. 0207

Cytology *vide* Physiology.

General.

Petrunkevitch, 112; **Retterer & Neuville, 119, 120**; **Thompson, 134**; **Trouessart, 137, 138**; Shoulder-girdle, **Watson, 145.**

Nervous System.

Droogleever Fortuyn, 29, 30; **Retzius, 121.**

PHYSIOLOGY. 0211

General. Miscellaneous.

Osmotic pressure, **Atkins, 5**; cryoscopic and osmotic data, **Garrey, 38**; **Henseler**. Einfluss der Ernährung auf die morphologische und physiologische Gestaltung **52**; **Lillie, 71.**

Cytological.

Cowdry, 21; **Giardina, 40**; **Hilton, 57**; **Meyer, 96**; **Saguchi, 128**; **Van Cleave, 139.**

Sex.

Herwerden, 56; **Petrov, 111**; **Riddle, 124.**

Function.

Fehlmann, respiration, **34**; Muscles, **Jordan, 65**; **Kroman, 69**; **Jordan** und **Lam**, Darmdurchlässigkeit, **67.**

Environment.

Mayer, 94.

Longevity.

Loeb and **Northrop, 77**; **Sewertzoff, 131.**

Chemical.

Carracido, 16.

DEVELOPMENT. 0215

General. Miscellaneous.

Van Cleave, 139; **Wintrebert, 149.**

Spermatozoa.

Loeb, 76; **Zeleny** and **Faust, 152.**

Parthenogenesis.

Herlant, 53.

Fertilization.

Herlant, 53; **Richards** and **Woodward, 123**

Embryology.

Agassiz and **Whitman, 3**; **Danchakoff, 24**; **Delsman, 26**; **Floderus, 35**; **Herwerden, 55**; **MacBride, 88**; **Painter, 106**; **Richards, 122.**

Regeneration.

Boeke, 10; Growth and regeneration, **Thompson, 134.**

ETHOLOGY. 0219

General. Miscellaneous.

Shelford, 132; **Wahlgren, 143**; **Abbott**, Mimicry, **1**; **Tillett**, Mimicry, **136**; **Longley**, Coloration, **81**; **Jordan**, Handlungen der niederen Tiere, **66.**

Social.

Silvestri, 133.

Luminosity.

Dubois, 31; **Harvey, 50.**

Parasitism.

Ihle, 60.

Habitat.

Minozzi, Cave, **98.**

Plankton.

Ostenfeld, 105a.

Intelligence. Tropisms.

Buytendyk, 14; **Garrey, 37**; **Loeb & Northrop, 78**; **Loeb & Wasteneys, 79, 80**; **Yerkes & Yerkes, 150.**

AETIOLOGY. 0223

General.

Loeb, 74.

Variation.

Gates, 39.

Telegony.

Rabaud, 118.

Heredity.

Benders, 6; **Conklin, 18**; **Darbishire, 25**; **Dunn, 33**; **Goodspeed** & **Clausen, 44**; **Hoge, 58**; **Holmes, 59**; **Johannsen, 64**; **Lotsy, 82**; **MacBride, 87**; **Metz** & **Bridges, 95**; **Morgan, 100, 101**; **Pearl, 108, 109**; **Pearl** & **Miner, 110**; **Rabaud, 116**; **Riel, 125**; **Vermeulen, 141**; **Wilson, 148**; Semon's theory, **Zanolli, 151.**

Evolution. Origin of Species.

Boas, 9; **Gregory, 46**; **Lull, 84**; **Morgan, 99**; **Osborn, 105**; Selection, **Pearl, 107**; Causes influencing extinction of species, **Rabaud, 117.**

GEOGRAPHY. 0227

General.

Grinnell, 47; **Haas, 49**; †Marine Reiche Trias, **Diener, 27.**

Ocean.

Michael & **McEwen, 97**; **McEwen, 89.**

Europe. *d*

Scandinavia, Denmark. *da*

Alm, 4; **Lundblad, 86**; **Wahlgren, 143**; †**Nielsen, 103.**

Russian Empire. *db*

Kaukasusländern und Hocharmenien, **Rikli, 126.**

British Islands. *de*

Inverness-shire, **Clarke, 17**; Ireland, **Scharff, 129.**

Iberian peninsula. *dg*

Spain **Fuente, 36**; **Rioja, 127.**

Italy. *dh*

Minozzi, 98.

Switzerland. *di*

Engadine, **Borner, 12**; Switzerland, **Zschokke, 153, 154,**

Asia and Malay Archipelago. *e*

†**Dollfuss, 28**; †**Martin,** from Celebes, oligocene. **92, 93**; **Shelford, 132.**

Africa. *f*

Loveridge, 82; **Pilette, 113**; **Silvestri, 133.**

North America. *g*

Brumfiel, Macroscopic fauna of a small brook, **13**; †**Dall, 23**; †**Girty, 41, 42, 43**; †**Lull, 85**; Canada, historical, **McMurrich, 90**; **Purdy,** Potamac plankton, **115**; **Vorhies,** Utah, **142.**

Central and South America. *h*

Costa Rica, **Calvert** & **Calvert, 15**; Brazil, **Neiva & Penna, 102.**

Australasia. *i*

Australia, **Waite, 144**; New Guinea, **Ogilvie-Grant** & others, **104**; **Wichmann, 146.**

Arctic. *k*

†Greenland, **Jensen, 62.**

TAXONOMY. 0231

Retterer & **Neuville, 119, 120**; **Trouessart, 137, 138.**

II. PROTOZOA

ARRANGED BY

H. M. WOODCOCK.

CONTENTS

PAGE

I. Titles 4

II. Subject Index :—

Comprehensive and General = 0403 :—

Bibliography.. 17

Treatises, Collected Works 17

Addresses, Reviews.. 17

Economics 17

Protozoa and the soil 17
Protozoa and disease 17
Amoebosis 17
Gregarinosis 17
Coccidiosis 17
Malaria 17
Piroplasmosis 17
Myxosporidiosis 17
Trypanosomosis 17
Leishmaniosis 17
Flagellosis 17
Balantidiosis 17
Various 17

Miscellaneous 17
Experimental infection 17
Cultivation 18
Technique.. 18

Structure = 0407 :—

General Anatomy, Morphology 18

(a) of Sarcodina 18
(b) of Sporozoa 18
(c) of Mastigophora 18
(d) of Ciliophora 18

PAGE

Minute Structure; Special Anatomy:—
(a) Shell, envelope, etc. 18
(b) Organellae of locomotion 18
(c) Nucleus and cytoplasm 18
(d) Nuclear division-mechanisms 18

Physiology = 0411:—
General 18
Nutrition, excretion.. 18
Locomotion 18
Sense organs 18
Depression-periods; Recuperation 18
Immortality 18
Environmental effects; response to stimuli 18
Immunity 18
Effects of reagents 18

Development and reproduction = 0415:—
(a) Mycetozoa 19
(b) Sarcodina 19
(c) Sporozoa 19
(d) Mastigophora 19
(e) Ciliophora 19

Ethology = 0419:—
Biology, habits 19
Plankton 19
Parasitism 19
(a) Natural Transmission 19
(b) Carriers 19
(c) Hosts 19
Turbellaria 19
Polychaeta 19
Hirudinea 19
Chaetognatha 19
Crustacea 19
Insecta 19
Mollusca 19
Hemichordata 19
Tunicata 19
Pisces 20
Amphibia 20
Reptilia.. 20
Aves 20
Mammalia 20

Variation, Phylogeny = 0423.. 20

PAGE

Distribution, Geography = 0427 :—
Geographical.. 20
Europe 20
Asia 20
America 20

Geological :—
Tertiary 20
Secondary 20

III. Systematic = 0431 :—

Protozoa, General 20

1. Mycetozoa 20

2. Sarcodina 20
(a) Amoebaea 20
(b) Foraminifera 21
(c) Heliozoa 22
(d) Radiolaria 23

3. Sporozoa 23
(a) Gregarinidea 23
(b) Coccidiidea 24
(c) Haemosporidia 24
(d) Myxosporidia.. 25
(e) Actinomyxidia (vacant)
(f) Sarcosporidia.. 26
(g) Haplosporidia (vacant)
Incertae sedis.. 26

4. Mastigophora 26
(a) Flagellata 26
(b) Silicoflagellata (vacant)
(c) Dinoflagellata.. 27
(d) Rhynchoflagellata (vacant)

5. Ciliophora 28
(a) Ciliata.. 28
(b) Suctoria (vacant)

Protozoa Incertae sedis 28

I.—TITLES.

Alexeieff, A. Mitochondries et corps parabasal chez les Flagellés. Paris C. R. Soc. Biol. **80** 1917 (358–361). **1**

Alexeieff, A. Mitochondries et rôle morphogène du noyau. Paris C. R. Soc. Biol. **80** 1917 (361–363). **2**

Alexeieff, A. Nature mitochondriale du corps parabasal des Flagellés. Paris C. R. Soc. Biol. **80** 1917 (499–502). **3**

Alexeieff, A. Sur les mitochondries à fonction glycoplastique. Paris C. R. Soc. Biol. **80** 1917 (510–512). **4**

Alexeieff, A. Sur la fonction glycoplastique du kinétoplaste (= kinétonucleus) chez les Flagellés. Paris C. R. Soc. Biol. **80** 1917 (512–514). **5**

Alexeieff, A. Sur le cycle évolutif et les affinités de *Blastocystis enterocoela.* Arch. Zool. éxp. Paris **56** N. et R. 1917 (113–128). **6**

Anderson, J. The connection of *Nosema apis* and "Isle of Wight" disease in hive bees: remarks on the evidence submitted in the Board of Agriculture Reports of 1912 and 1913. Edinburgh Proc. R. Physic. Soc. **20** 1916 (16–22). **7**

Anderson, John, and Rennie, John. Observations and experiments bearing on "Isle of Wight" disease in hive bees. Edinburgh Proc. R. Physic. Soc. **20** 1916 (23–61) pl. i. **8**

Appel, Leo. Zur Färbetechnik der Malariaparasiten. Centralbl. Bakt. Jena Abth. 1 **80** Orig. 1917 (105–107). **9**

Aragão, H. de B. Algumas observaçoes relativas as endamebas dysentericas. Brazil Medico **31** 1917 (105–106 113–114). **10**

Armand-Delille, P. Remarques sur les aspects parasitologiques du paludisme contracté en Macédoine. Paris C. R. Acad. Sci. **165** 1917 (202 and 203). **11**

Ata, Arif, Goldberg, L., and Omar, Neschat. Experimentelles über die Jerichobeule. B. Reinkultur des Parasiten der Beule. Centralb. Bakt. Jena Abth. 1 Orig. **79** 1916 (25 and 26). **12**

Auerbach, M. Bemerkungen über Myxosporidien. Zool. Anz. Leipsic **49** 1917 (145–157). **13**

Barratt, J. O. W. A search for dysentery carriers among soldiers coming from Gallipoli and Egypt. Brit. Med. J. London **1916** ii (617–619). **14**

Beardslee, H. C. Michigan collections of Myxomycetes. Lansing Rep. Michigan Acad. Sci. **19** 1917 (159–162). **15**

Boeck, W. Mitosis in *Giardia microti.* Berkeley Univ. Calif. Publ. Zool. **18** 1917 No. 1 (1–26) pl. i. **16**

Boeck, W. A rapid method for the detection of Protozoan cysts in mammalian faeces. Berkeley Univ. Cal. Publ. Zool. **18** No. 9, 1917 (145–149). **17**

Bouilliez, M. Recherches expérimentales sur *Leishmania tropica.* Paris Bull. Soc. path. exot. **10** 1917 (66–86). **18**

Boynton, W. H. A disease in cattle in the Philippine Islands similar to that caused by *Anaplasma marginale* Theiler. Philippine J. Sci. Manila Sect. **B 12** 1917 (281–291) 3 pls. **19**

Branden, van den J., *vide* Rodhain, J.

Brünn, W. Beschleunigte Schizogonie bei Malaria tertiana und dadurch bedingte Umwandlung des Tertianfiebertypus in einen quotidianen. Centralbl. Bakt. Jena Abth. 1 **79** Orig. 1917 (84–89) 1 pl. **20**

Brug, S. L. Les kystes des amibes intestinales de l'homme. Paris Bull. Soc. path. exot. **10** 1917 (799–803). **21**

Bürger, O. Nuevos estudios sobre Protozoos chilenos del agua dulce. Anales Univ. Santiago de Chile **122** 1908 (137–204) pls. i–xv. **22**

Calkins, G. N. *Didinium nasutum.* 1. The life history. J. Exp. Zool. Philadelphia **19** 1915 (225–241) 1 pl. **23**

Calkins, G. N. The effects of cancer tissue and of normal epithelium on the vitality of Protozoa. *Didinium nasutum.* 2. The Journal of Cancer Research Baltimore **1** 1916 (205–226) tables diagrs. **24**

Calkins, G. N. The effects of cancer tissue, embryonic tissue, and normal tissue on the vitality of Protozoa. *Didinium nasutum.* 3. J. Cancer Res. Baltimore **1** 1916 (399–414) tables. **25**

Calkins, G. N. General biology of the Protozoan life-cycle. Amer. Nat. New York **50** 1916 (257–270). **26**

Carnot, P. Sur le mécanisme de la disparition des schizontes dans le sang périphérique au cours des accès de paludisme. Paris C. R. Soc. Biol. **80** 1917 (575–578). **27**

Carnot, P. Sur la schizontolyse au cours de l'accès de paludisme. Action du sérum, des leucocytes, des extraits spléniques. Paris C. R. Soc. Biol. **80** 1917 (685–688). **28**

Carter, H., **Mackinnon,** Doris, **Matthews,** J. R., and **Smith,** Malins. The protozoal findings in 910 cases of dysentery examined at the Liverpool School of Tropical Medicine, May to September, 1916. Ann. Trop. Med. Parasitol. Liverpool **10** 1917 (411–426). **29**

Carter, H., **Mackinnon,** Doris, **Matthews,** J. R., **Smith,** Malins, and **Stephens,** J. W. Protozoological investigations of cases of dysentery conducted at the Liverpool School of Tropical Medicine. Ann. Trop. Med. Parasitol. Liverpool **11** 1917 (27–68). **30**

Carter, H., and **Matthews,** J. R. The value of concentrating the cysts of Protozoan parasites in examining the stools of dysenteric patients for pathogenic *Entamoebae.* Ann. Trop. Med. Parasitol. Liverpool **11** 1917 (195–204) **31**

Carter, H., *vide* Yorke, W.

Chalmers, A. J., and **O'Farrell,** W. R. A case of urinary amœbiasis in the Anglo-Egyptian Soudan. J. trop. Med. London **20** 1917 (97–100). **32**

Chalmers, A. J., and **Pekkola,** Waino. A new human intestinal Flagellate in the Anglo-Egyptian Soudan. J. trop. Med. London **19** 1916 (142–146). **33**

Chalmers, A., and **Pekkola,** Waino. *Enteromonas hominis* da Fonseca 1915 in a British officer. Paris Bull. Soc. path. exot. **10** 1917 (756–761). **34**

Chapman, F., and **Gabriel,** Ch. J. On a shell-bed underlying volcanic Tuff near Warrnambool: with notes on the age of the deposit. Melbourne Proc. R. Soc. Vict. **30** 1917 (4–14). **35**

Chatterjee, G. C. Note on Flagellate dysentery. Calcutta Ind. J. Med. Res. **4** 1917 (393–401) pls. xxiv–xxix. **36**

Chatterjee, G. C. A *Trichomastix* (n. sp.) parasitic in the human intestine. Calcutta Ind. J. Med. Res. **5** 1917 (217–221) pls. xxxii and xxxiii. **37**

Chatton, E. Les "*Blastocystis*" stades du cycle évolutif de Flagellés intestinaux. Paris C. R. Soc. Biol. **80** 1917 (555–560) 1 pl. **38**

Chatton, E. Au sujet des cristalloides (chromidium, corps chromatoides, bâtonnets ou plages sidérophiles) des kystes d'Entamibes. Paris Bull. Soc. path. exot. **10** 1917 (791–794). **39**

Chatton, E. Réalisation expérimentale chez le cobaye de l'amibiase intestinale à *Entamoeba dysenteriae.* Paris Bull. Soc. path. exot. **10** 1917 (794–799). **40**

Chatton, E. L'éclosion des kystes et les premiers stades de l'évolution de l'amibe dysentérique humaine chez le chat. Paris Bull. Soc. path. exot. **10** 1917 (834–840). **41**

Chatton, E. La genèse des stigmates globulaires (taches de Maurer, grains de Schüffner) dans le paludisme. Leur rapports avec l'amœboidisme hémamibien. Leur faible valeur différentielle.

Paris Bull. Soc. path. exot. **10** 1917 (841–849) pl. viii. **42**

Chatwin, C. P., *vide* Hinde, G. J.

Churchman, J. W. and **Russell,** D. G. The effect of gentian violet on Protozoa and on growing adult tissue. New York Proc. Soc. Exp. Biol. Med. **11** 1914 (120–124). **43**

Clarke, C. *vide* Dudgeon, L. S.

Cole, A. F. *vide* Knowles, R.

Comandon, J. Phagocytose *in vitro* des Hématozoaires du calfat (enregistrement cinématographique). Paris C. R. Biol. **80** 1917 (314–316). 1 pl. **44**

Cornwall, J. W. and **Menon,** Kesava. A contribution to the study of Kala-Azar. 3. Calcutta Ind. J. Med. Res. **4** 1917 (672–687). **45**

Cox, P. Investigation of a disease of the herring (*Clupea harengus*) in the Gulf of St. Lawrence, 1914. Contrib. Canad. Biol. Ottawa **1914–1915** (1916) (81–85) pls. viii and ix. **46**

Cragg, F. W. Observations on dysentery cases from Mesopotamia. Calcutta Ind. J. Med. Res. **5** 1917 (301–329). **47**

Craig, C. F. The classification of the parasitic *Amoebae* of man. J. Med. Res. Boston **35** 1916–1917 (425–442). **48**

Crawley, H. The sexual evolution of *Sarcocystis muris*. Philadelphia Proc. Acad. Sci. **68** 1916 (2–43) pls. i–v. **49**

Crawley, H. The zoological position of the Sarcosporidia. Philadelphia Proc. Acad. Sci. **68** 1916 (379–388). **50**

Cropper, J. W. and **Row,** R. H. A method of concentrating *Entamoeba*-cysts in stools. Lancet London **1917** i (179–182). **51**

Cunha, A. da. Sobre a presença do *Balantidium* no cavallo. Brazil Medico **31** 1917 (337). **52**

Cunha, A. da and **Fonseca,** O. R. da. Sobre uma nova entaméba, *Entamoeba serpentis*, n. sp. (Nota previa). Brazil Medico **31** 1917 (279). **53**

Cunha, A. da and **Fonseca,** O. R. da. Sobre os myxosporidios dos peixes brazileiros (nota previa). Brazil Medico **31** 1917 (321). **54**

Cunha, A. da and **Fonseca,** O. da. O microplancton do Atlantico nas imediaçoes de Mar del Plata. Rio de Janeiro Mem. Inst. Oswaldo Cruz **9** 1917 (140–142). **55**

Cunha, A. da *vide* Faria, Gomes de.

Cushman, J. A. New species and varieties of Foraminifera from the Philippines and adjacent waters. [Sci. Results Philippine Cruise Fish. Steamer "Albatross," 1907–1910, No. 35.] Washington Proc. U.S. Nat. Mus. **51** 1917 (651–662). **56**

Darling, E. R. Notes on a new (?) species of *Loxodes* (Ehrbg.). Trans. Amer. Microsc. Soc. Decatur (Ill.) **35** 1916 (64 and 65). **57**

Davis, H. S. The structure and development of a Myxosporidian parasite of the Squeteague, *Cynoscion regalis*. J. Morph. Philadelphia (Pa.) **27** 1916 (333–377), 7 pls. **58**

Delanoë, P. Sur les altérations des globules parasités par les Hématozoaires du paludisme. Paris Bull. Soc. path. exot. **10** 1917 (543–547). **59**

Dimond, Lyn. Trench-fever, or P.U.O., associated with the presence of a Haemogregarine. Lancet London **1917** ii (382–384) diagrams. **60**

Dixon, Annie. Report on Protozoa collected on rambles, 1916. Manchester, Rept. Trans. Microsc. Soc. **1916** (1917) (114–119). **61**

Dobell, C. On *Oxnerella maritima* nov. gen., nov. spec., a new Heliozoan, and its method of division; with some remarks on the centroplast of the Heliozoa. Q. J. Microsc. Sci. London **62** 1917 (515–538) pl. xxvii. **62**

Dobell, C. Incidence and treatment of *Entamoeba histolytica*-infection at Walton Hospital. Brit. Med. J. London 1916 ii (612–616). **63**

Dobell, C. and **Jepps,** Margaret. On the three common intestinal *Entamoebae* of Man and their differential diagnosis. Brit. Med. J. London **1917** i (607–612). **64**

Dobell, C. *vide* Low, G.

Donaldson, R. An easy and rapid method of detecting protozoan cysts in faeces by means of wet-stained preparations. Lancet London **1917** i (571–573). **65**

Douvillé, H. Les Orbitoides de l'Ile de la Trinité. Paris C. R. Acad. Sci. **164** 1917 (841–847). **66**

Douvillé, H. Le Cretacé et l'Eocène du Thibet central. Paris C. R. Acad. Sci. **165** 1917 (133–135). **67**

Douvillé, H. Le Tertiaire du golfe aquitanien et ses différences de faciès. Paris C. R. Acad. Sci. **165** 1917 (529–533). **68**

Douvillé, H. L'Éocène inférieur de l'Aquitaine et sa faune de Nummulites. Paris C. R. Acad. Sci. **165** 1917 (609–615). **69**

Douvillé, H. Le Cretacé et l'Eocène du Thibet central. Palaeont. ind. Calcutta N. S. 5 Mem. 3 1916 (1–52), 16 pls. **70**

Drew, A. H. and **Griffin, Una.** The parasitology of pyorrhoea alveolaris. London J. R. Microsc. Soc. **1917** (185–197) pls. xiv–xvii. **71**

Drew, A. H. *vide* Penfold, W. J.

Duboscq, O. Sur un nouveau Sporozoaire, *Selysina perforans*, n.g., n.sp. Paris C. R. Acad. Sci. **164** 1917 (450–453). **72**

Duboscq, O., *vide* Léger, L.

Dubreuil, J. *vide* Tribondeau, L.

Dudgeon, L. S. and **Clarke, C.** On the cultivation of the malarial parasite *in vitro*. Lancet London **1917** i (530 and 531). **73**

Earland, A. *vide* Heron-Allen, E.

Edwards, J. G. *vide* Kepner, W. A.

Emerson, B. K. Polarization of *Globigerina*. Science New York **43** (N.S.) 1916 (316). **74**

Erdmann, Rhoda. New facts and views concerning the occurrence of a sexual process in the Myxosporidian life-cycle. Amer. Nat. New York **51** 1917 (719–739). **75**

Erdmann, Rhoda and **Woodruff, Lorande L.** The periodic reorganization-process in *Paramœcium caudatum*. J. exp. Zool. **20** 1916 (59–97) 7 pls. **76**

Erdmann, Rhoda *vide* Woodruff, Lorande L.

Escomel, E. Le *Phyllodactylus gerrhopygus* au Pérou. Son infection par une Hémogregarine. Paris Bull. Soc. path. exot. **10** 1917 (873–878). **77**

Evans, T. Carey. Clinical observations on dysentery. Brit. Med. J. London **1917** i (418–420). **78**

Fantham, H. B. *Amoebae* in urine in a case of infectious jaundice. Brit. Med. J. London **1916** i (553 and 554). **79**

Fantham, H. B. Remarks on the nature and distribution of the parasites observed in the stools of 1,305 dysenteric patients. Lancet London **1916** i (1165 and 1166). **80**

Fantham, H. B. and **Porter, Annie.** The pathogenicity of *Giardia* (*Lamblia*) *intestinalis* to men and experimental animals. Brit. Med. J. London **1916** ii (139–141). **81**

Fantham, H. B. and **Porter, Annie.** On induced herpetomoniasis in birds. Cambridge Proc. Cambr. Phil. Soc. **18** 1916 (189–194). **82**

Fantham, H. B. and **Porter, Annie.** The Flagellate Protozoa associated with diarrhoea and dysentery. Rep. Brit. Ass. London **1916** 1917 (419 and 420). **83**

Fantham, H. B. and **Porter, Annie.** The significance of certain natural Flagellates of Insects in the evolution of disease in Vertebrates. J. Parasitol. Urbana (Ill.) **2** 1916 (149–166) with table. **84**

Fantham, H. B., **Stephens, J. W.** and **Theobald, F. V.** The animal parasites of Man. (Partly adapted from Max Braun's "Die thierischen Parasiten des Menschen," 4th edit.) London (J. Bale, Sons & Danielson). **1916.** Roy. 8vo. (xxxii + 900) with 423 figs. **85**

Faria, Gomes de and **Cunha, A.** da. Estudos sobre o microplankton da baia do Rio de Janeiro e suas imediaçoes (1a Contrib.). Rio de Janeiro Mem. Inst. Oswaldo Cruz **9** 1917 (68–93) pl. xxvi. **86**

Faria, G. de, **Cunha, A.** da and **Fonseca, O. R.** Sobre es protozoarios parasitos da *Polydora socialis*. Brazil Medico **31** 1917 (243). **87**

Fedorovitch, A. Hémoparasites trouvés dans un cas de fièvre chronique. Ann. Inst. Pasteur Paris **30** 1916 (249 and 250) pls. v and vi *p.p.* **88**

Findlay, M. Amoebic dysentery and its relationship to a form of diarrhoea occurring in Egypt. Lancet London **1917** i (755 and 756). **89**

Floyd, J. F. Note on *Trypanophis grobbeni*, a Protozoan parasite of

Siphonophora. Edinburgh Proc. R. Physic. Soc. **20** 1916 (62–64) pl. ii. **90**

Fonseca, O. da. Sobre os flagellados parasitos (4a and 5a nota previa). Brazil Medico **31** 1917 (305, 306 and 417). **91**

Fonseca, O. da *vide* Cunha, A. da.

Franca, C. Quelques observations sur les *Trichonymphidae.* Ann. Inst. Pasteur Paris **30** 1916 (195–204). **92**

Fray, W. *vide* Hargitt, G. T.

Galli-Valerio, B. Parasitologische Untersuchungen und Beiträge zur parasitologischen Technik. Centralbl. Bakt. Jena Abth. 1 **79** Orig. 1916 (41–48); and *op. cit.* **80** Orig. 1917 (264–271). **93**

Galli-Valerio, B. Are Sarcosporidia aberrant forms of Cnidosporidia of Invertebrates? J. Parasitol. Urbana (Ill.) **2** 1916 (126–128). **94**

Georgévitch, J. Sur le cycle évolutif de *Myxidium gadi* Georgévitch. Paris C. R. Acad. Sci. **165** 1917 (797–799). **95**

Georgévitch, J. Esquisses protistologiques. Paris Bull. Soc. Zool. France **42** 1917 (99–107). **96**

Georgévitch, J. Recherches sur le développement de *Ceratomyxa herouardi* Georg. Arch. Zool. exp. Paris **56** 1917 (375–399) pls. xi–xiii. **97**

Goldberg, L. *vide* Ata, A.

Gonzalez, E. *vide* Iturbe, J.

Goodey, T. and **Wellings,** A. W. Observations on *Entamoeba gingivalis* from the human mouth, with a note on the Trichomonad Flagellate, *Tetratrichomonas buccalis,* n. sp. Parasitol. Cambridge **9** 1917 (537–559) pls. xx–xxii. **98**

Gordon, C. E. A method for obtaining *Amoeba.* Science New York **46** (N.S.) 1917 (212 and 213). **99**

Gran, H. H. The Plankton production in the North European waters in the spring of 1912. Copenhague Bull. Planktonique explor. mer **1912** (1915) (1–142) numerous tables. **100**

Greenaway, R. D. Abnormal reproduction in *Stylonichia.* Zoologist London Ser. 4 **20** 1916 (198 and 199). **101**

Greenaway, R. D. Notes on the inability of natural selection to explain certain steps in the evolution of Protozoa. Zoologist London Ser. 4 **20** 1916 (303–311). **102**

Grier, N. M. A new species of *Opercularia.* Trans. Amer. Microsc. Soc. Decatur (Ill.) **35** 1916 (138 and 139) pl. xix. **103**

Griffin, Una *vide* Drew, A. H.

Hadley, P. The case of *Trichomonas.* Amer. Nat. New York **51** 1917 (209–224). **104**

Hahn, C. W. On the Sporozoan parasites of the fishes of Woods Hole and vicinity. I. Further observations on *Myxobolus musculi* from *Fundulus.* J. Parasitol. Urbana (Ill.) **3** 1916 (91–104). **105**

Hahn, C. W. On the Sporozoan parasites of the fishes of Woods Hole and vicinity. II. Additional observations upon *Myxobolus musculi* of *Fundulus* and a nearly related species, *M. pleuronectidae,* of *Pseudopleuronectes americanus.* J. Parasitol. Urbana (Ill.) **3** 1917 (150–162) 1 pl. **106**

Hahn, C. W. On the Sporozoan parasites of the fishes of Woods Hole and vicinity. III. On the *Chloromyxum clupeidae* of *Clupea harengus* (Young), *Pomolobus pseudoharengus* (Young) and *P. aestivalis* (Young). J. Parasitol. Urbana (Ill.) **4** 1917 (13–20). **107**

Hance, R. T. Notes on handling Protozoa in pure line work. Trans. Amer. Microsc. Soc. Decatur (Ill.) **35** 1916 (135–137). **108**

Hance, R. T. Studies on a race of *Paramœcium* possessing extra contractile vacuoles. I. An account of the morphology, physiology, genetics and cytology of this new race. J. exp. Zool. Philadelphia **23** 1917 (287–333) 3 pls. **109**

Hargitt, G. T., and **Fray,** W. The growth of *Paramœcium* in pure cultures of bacteria. J. exp. Zool. Philadelphia **22** 1917 (421–455). **110**

Harvey, Ethel B. A physiological study of *Noctiluca,* with special reference to light-production, anaesthesia and specific gravity. Proc. Nat. Acad. Sci. Washington **3** 1917 (15 and 16). **111**

Hausmann, L. A. Observations on the œcology of the Protozoa. Amer. Nat. New York **51** 1917 (157–172). **112**

Henry, H. The "Haemogregarine" of trench fever. Brit. Med. J. London **1917** ii (739 and 740). **113**

Heron-Allen, E. On beauty, design and purpose in the Foraminifera. London Proc. Roy. Inst. **21** 1917 (473–485). **114**

Heron-Allen, E. Alcide d'Orbigny, his life and work. (Presidential Address, 1916–1917.) To which is appended a study of the Foraminifera of the Biscayan Coast of France in the neighbourhood of La Rochelle. London, J. R. Microsc. Soc. **1917** (1–105 433 and 434) pls. i–xiii. **115**

Heron-Allen, E. and **Earland,** A. On some Foraminifera from the North Sea, etc., dredged by the Fisheries Cruiser "Goldseeker" (International North Sea Investigations—Scotland). IV. On *Nouria rugosa*, a new species of Foraminifera from the Faroe Channel. London J. R. Microsc. Soc. **1917** (361–364) pl. xxiii. **116**

Heron-Allen, E. and **Earland,** A. On some Foraminifera from the North Sea, etc., dredged by the Fisheries Cruiser "Goldseeker" (International North Sea Investigations—Scotland). V. On *Thurammina papillata* Brady: a study in variation. London J. R. Microsc. Soc. **1917** (530–557) pls. xxvi–xxx. **117**

Hesse, E. *vide* Léger, L.

Hills, T. L. The relation of Protozoa to certain groups of soil Bacteria. J. Bact. Baltimore **1** 1916 (423–433). **118**

Hinde, G. J. and **Chatwin,** C. P. Notes on specimens of organic rocks from Central Celebes. I. Siliceous rocks with Radiolaria. II. Calcareous rocks with Foraminifera. (E. C. Abendanon. Geologische en geographische doorkruisingen van Midden-Celebes.) Leiden (E. J. Brill) Vol. **3** 1917 (953–956). **119**

Hogue, Mary J. The effect of media of different densities on the shape of Amœbae. J. exp. Zool. Philadelphia **22** 1917 (565–572). **120**

Hollande, A. C. *vide* Léger, L.

Howard, H. J. Notes upon *Physarum carneum* G. Lister and Sturgis: a new British species of Mycetozoa. London J. R. Microsc. Soc. **1917** (265–268) pl. xviii. **121**

Hutchison, R. H. The effects of certain salts, and of adaptation to high temperatures, on the heat resistance of *Paramoecium caudatum*. Amer. J. Exp. Zool. Philadelphia **19** 1915 (211–224). **122**

Hyde, Ida H. and **Spreier,** Christine. The influence of light on reproduction in *Vorticella*. Amer. J. Physiol. Baltimore **36** 1915 (398–399). **123**

Ikeda, Iwaji. A new astomatous Ciliate, *Metaphrya sagittae* gen. et sp. nov., found in the coelome of *Sagitta*. Annot. zool. Japon. Tokyo **9** 1917 (317–324). **124**

Ingram, A. *vide* Macfie, J. W.

Inman, A. C. The detection of *Entamœba histolytica* and its cysts: notes on the technique for conducting examinations of human faeces. Lancet London **1917** i (990 and 991). **125**

Ishiwata, Shigetane. Note on a species of *Nosema* infecting *Attacus cynthia* Drury. J. Parasitol. Urbana (Ill.) **3** 1917 (136 and 137). **126**

Iturbe, J. and **Gonzalez,** E. First case of leishmaniosis cutanea in Venezuela. J. Parasitol. Urbana (Ill.) **4** 1917 (44–47). **127**

Jääskeläinen, V. Kalaloiset Kemijoesta. [Fischparasiten aus dem Kemijoki-Fluss.] Helsingfors Medd. Soc. Fauna et Fl. Fenn. **39** 1913 (92–93) [Deutsches Ref. 248 254.] **128**

Jack, R. Natural transmission of trypanosomiasis (*T. pecorum* group) in the absence of Tsetse-flies. Bull. Ent. Res. London **8** 1917 (35–41). **129**

James, S. P. The intravenous administration of quinine bihydrochloride in malaria and a remark upon the form of the parasite responsible for true relapses. London J.R.A.M.C. **29** 1917 (317–322). **130**

James, S. P. Note recording the proof that *Anopheles maculipennis* is an effectual host of the benign tertian malarial parasite in England. London J.R.A.M.C. **29** 1917 (615). **131**

Jepps, Margaret. Note on some examinations and treatments for *Entamoeba histolytica* infections. Brit. Med. J. London **1916** ii (616 and 617). **132**

Jepps, M. *vide* Dobell, C.

Kamm, Minnie W. Notes on known Gregarines. J. Parasitol. Urbana (Ill.) **4** 1917 (40–43) 1 pl. **133**

Kamm, Minnie W. The development of Gregarines and their relation to the host-tissues : (1) in *Stenophora lactaria* Watson. J. Parasitol. Urbana (Ill.) **3** 1917 (124–130) 2 pls. **134**

Kamm, M. *vide* Watson, M.

Keilin, D. Une nouvelle Entamibe, *Entamoeba mesnili* n. sp., parasite intestinale d'une larve d'un Diptère. Paris C. R. Soc. Biol. **80** 1917 (133–136) 1 pl. **135**

Kennedy, A. M. and **Rosewarne,** D. Observations upon dysentery carriers. Brit. Med. J. London **1916** ii (864–866) **136**

Kennedy, A. M. and **Rosewarne,** D. D. *Lamblia intestinalis* infections from Gallipoli. Lancet London **1916** i (1163–1165). **137**

Kepner, W. A. and **Edwards,** J. G. Nucleus of *Chilomonas paramoecium* Ehrenberg. Biol. Bull. Woods Hole (Mass.) **31** 1916 (213–219). **138**

King, W. V. The effect of cold upon malarial parasites in the mosquito-host. J. exp. Med. New York **25** 1917 (495–498) pls. xxxviii and xxxix. **139**

King, W. V. *Anopheles punctipennis,* a host of tertian malaria. Amer. J. trop. dis. New Orleans **3** 1916 (426–432), pl. viii. **140**

Knowles, R. and **Cole,** A. F. A study of Entamoebic cysts. Calcutta Ind. J. Med. Res. **4** 1917 (498–610) pls. xxxix–xli and many charts. **141**

Kofoid, Ch. Atwood and **Swezy,** Olive. On the orientation of *Erythropsis.* Berkeley Univ. Cal. Publ. Zool. **18** No. 6 1917 (89–102). **142**

Krempf, A. Sur un Hématozoaire endoglobulaire nouveau de l'homme (*Haemogregarina hominis*). Paris C. R. Acad. Sci. **164** 1917 (965–967). **143**

Kudo, R. Contributions to the study of parasitic Protozoa. III. Notes on Myxosporidia found in some fresh-water fishes of Japan, with the description of three new species. J. Parasitol. Urbana (Ill.) **3** 1916 (3–9). **144**

Kudo, R. Contributions to the study of parasitic Protozoa. II. *Myxobolus toyamai* nov. spec., a new Myxosporidian parasite in *Cyprinus carpio* L. J. Parasitol. Urbana (Ill.) **3** 1917 (163–170) 2 pls. **145**

Lapparent, J. de. Sur un Foraminifère de la craie des Alpes et des Pyrénées. Paris C. R. Acad. Sci. **164** 1917 (731–734). **146**

Larue, G. R. Notes on the collection and rearing of *Volvox.* Trans. Amer. Microsc. Soc. Decatur (Ill.) **35** 1916 (150–154) and **36** 1917 (271 and 272). **147**

Larue, G. R. Notes on the culturing of microscopic organisms for the zoological laboratory. Trans. Amer. Microsc. Soc. Decatur (Ill.) **36** 1917 (163–169). **148**

Lashley, K. S. *vide* Mast, S. O.

Laveran, A. Boutons d'Orient expérimentaux chez les singes ; multiplication des boutons primaires par auto-inoculations chez un *Cercopithecus mona.* Paris C. R. Acad. Sci. **165** 1917 (306–309). **149**

Laveran, A. Identification des virus de trypanosomiase équine marocaine de deux origines. Paris Bull. Soc. path. exot. **10** 1917 (850–856). **150**

Laveran, A. Leishmanioses, Kala-Azar, bouton d'Orient, leishmaniose américaine. Paris (Masson et Cie) **1917** 8vo (iv + 524) 6 pls. text-figg. **151**

Lebour, Marie. The microplankton of Plymouth Sound, from the region beyond the breakwater. Plymouth J. Marine Biol. Ass. **11** 1917 (133–182) 2 tables. **152**

Lebour, Marie. The Peridiniales of Plymouth Sound, from the region beyond the breakwater. Plymouth J. Marine Biol. Ass. **11** 1917 (183–200). **153**

Léger, L. et **Duboscq,** O. *Pseudoklossia pectinis* n. sp. et l'origine des Adéleidées. Arch. Zool. exp. Paris **56** N. et R. 1917 (88–94). **154**

Léger, L. et **Duboscq,** O. Sporozoaires de *Glossobalanus minutus* Kow. *Eimeria* (?) *epidermica* n. sp. ; *E.* (?) *beauchampi* n. sp. ; *Selenidium metchnikovi* n. sp. Ann. Inst. Pasteur Paris **31** 1917 (60–72) pls. i–iii. **155**

Léger, L. et **Hesse,** E. Sur les Microsporidies de la crevette d'eau douce. Paris C. R. Soc. Biol. **80** 1917 (12–15). **156**

Léger, L. et **Hollande,** A. C. Sur un nouveau protiste à facies de *Chytridiopsis*, parasite des ovules de l'huitre. Paris C. R. Soc. Biol. **80** 1917 (61–64). **157**

Léger, M. Observations sur quelques *Leucocytozoon* d'oiseaux de la région de Reims. Paris Bull. Soc. path. exot. **10** 1917 (28–33). **158**

Léger, M. and **Mouzels,** P. *Plasmodium* de *Iguana nudicollis*. Paris Bull. Soc. path. exot. **10** 1917 (95–98). **159**

Léger, M. and **Mouzels,** P. Hémogregarine intraleucocytaire d'un saurien, *Tupinambis nigropunctatus*. Paris Bull. Soc. path. exot. **10** 1917 (283 and 284). **160**

Léger, M. and **Mouzels,** P. Piroplasme et microfilaire d'un Edenté, le *Bradypus tridactylus* Linné. Paris Bull. Soc. path. exot. **10** 1917 (173–176). **161**

Léger, M. and **Mouzels,** P. Hématozoaire endoglobulaire non- pigmenté d'une Anatidée. Paris Bull. Soc. path. exot. **10** 1917 (699–700). **162**

Low, G. C. A case of amoebic abscess of the liver occurring twenty years after the original attack of dysentery. Brit. Med. J. London **1916** ii (867 and 868). **163**

Low, G. C., also **Dobell,** C. The "Haemogregarine" of trench-fever. Lancet London **1917** ii (473 and 474). [Criticism of **Dimond, 60.**] **164**

Lund, E. J. The relations of *Bursaria* to food. II. Digestion and resorption in the food-vacuole and further analysis of the process of extrusion. J. exp. Zool. Philadelphia **17** 1914 (1–43) 2 pls. **165**

Lynch, Kenneth. "Dauercyst"-formation of *Trichomonas intestinalis*. J. Parasitol. Urbana (Ill.) **3** 1916 (28–33). **166**

MacAdam, W. and **Keelan,** R. The problem of the amoebic dysentery carrier in India and Mesopotamia. An investigation based on the protozoological findings in the stools of over 2,000 men, chiefly of the Mesopotamian field force. Calcutta Ind. J. Med. Res. **5** 1917 (239–272). **167**

Macfie, J. W. Preliminary note on a monomorphic Trypanosome found in the blood of a native of the Gold Coast. Brit. Med. J. London **1917** i (12 and 13). **168**

Macfie, J. W. A Flagellate frequenting the necks of bottles. J. trop. Med. London **20** 1917 (1–3). **169**

Macfie, J. W. and **Ingram,** A. Observations on malaria in the Gold Coast Colony, West Africa. Ann. Trop. Med. Parasitol. **11** 1917 (1–26) pls. i and ii. **170**

Mackinnon, Doris *vide* Carter, H., also Yorke, W.

Malleghem, R. van *vide* Wurtz, R.

Manaud, A. Coloration vitale de l'Hématozoaire du paludisme. Paris C. R. Soc. Biol. **80** 1917 (472–474). **171**

Manlove, C. H. Two cases of balantidial colitis. Philippine J. Sci. Manila Sect. **B 12** 1917 (149–163). **172**

Manson, P. Tropical Medicine and Hygiene. Brit. Med. J. London **1917** ii (103–109). **173**

Marzinowsky, E. J. De différentes espèces du parasite de la malaria. Ann. Inst. Pasteur Paris **30** 1916 (243–248) pls. iv–vi. **174**

Mast, S. O. The vitality of the cysts of the Protozoan, *Didinium nasutum*. Science New York **46** (N.S.) 1917 (70–72). **175**

Mast, S. O. Mutation in *Didinium nasutum*. Amer. Nat. New York **51** 1917 (351–360). **176**

Mast, S. O. The process of orientation in the colonial organism, *Gonium pectorale*, and a study of the structure and function of the eye-spot. J. exp. Zool. Philadelphia **20** 1916 (1–17). **177**

Mast, S. O. Conjugation and encystment in *Didinium nasutum* with especial reference to their significance. J. exp. Zool. **23** 1917 (335–359) tables. **178**

Mast, S. O. and **Lashley,** K. S. Observations on ciliary current in free-swimming *Paramoecia*. J. exp. Zool. Philadelphia **21** 1916 (281–293). **179**

Mast, S. O. and **Root,** F. M. Observations on Amoeba feeding on Infusoria, and their bearing on the surface-tension theory. Proc. Nat. Acad. Sci. Washington **2** 1916 (188 and 189) [*vide* **181**]. **180**

Mast, S. O. and **Root,** F. M. Observations on Amoeba feeding on Rotifers, Nematodes and Ciliates, and their bearing on the surface-tension theory. J. exp. Zool. Philadelphia **21** 1916 (33–49). **181**

Mathis, C. et **Mercier,** L. Existe-t-il des races d'*Entamoeba dysenteriae* ? Paris C. R. Soc. Biol. **80** 1917 (791–793). **182**

Mathis, C. and **Mercier,** L. Affinités d' *Entamoeba legeri* Mathis et d'*E. coli.* Arch. Zool. exp. Paris **56** N. et R. 1917 (63–72). **183**

Mathis, C. and **Mercier,** L. Existe-t-il des kystes à plus de quatre noyaux chez *Entamœba dysenteriae* ? Paris Bull. Soc. path. exot. **10** 1917 (165–170). **184**

Mathis, C. and **Mercier,** L. La schizogonie chez les Entamibes intestinales de l'homme. Paris Bull. Soc. path. exot. **10** 1917 (311–322) 1 pl. **185**

Mathis, C. and **Mercier,** L. Le soi-disant "chromidium" des kystes des Entamibes intestinales de l'homme. Paris Bull. Soc. path. exot. **10** 1917 (536–538 and 866–868). **186**

Matthews, J. R. *vide* Smith, A. Malins; also Carter, Henry; also Yorke, W.

Mavor, J. W. On the occurrence of a parasite of the pike in Europe, *Myxidium lieberkuhni* Bütschli, in the pike on the American Continent and its significance. Biol. Bull. Woods Hole Mass. **31** 1916 (373–378) 1 pl. **187**

Mavor, J. W. Studies on the Sporozoa of the fishes of the St. Andrews' region. Contrib. Canadian Biol. Ottawa **1911-1914** 1915 (25–38) pl. iv. **188**

Mavor, J. W. and **Strasser,** W. On a new Myxosporidian, *Henneguya wisconsinensis* n. sp., from the urinary bladder of the yellow perch, *Perca flavescens.* Wisconsin Trans. Acad. Sci. **18** 1916 (676–682). **189**

McCulloch, Irene. *Crithidia euryophthalmi* sp. nov., from the Hemipteran bug, *Euryophthalmus convivus* Stal. Berkeley Univ. Cal. Publ. Zool. **18** No. 5 1917 (75–88). **190**

McLean, R. C. The detection of *Entamoeba histolytica* and its cysts. Lancet London **1917** ii (63). **191**

McMurrich, J. P. The winter plankton in the neighbourhood of St. Andrews, 1914–15. Contrib. Canad. Biol. Ottawa **1915–1916** 1917 (1–8) table. **192**

Mendel, J. Recherches sur les Amibes dans la pyorrhée alvéolaire et les autres stomatopathies. Ann. Inst. Pasteur Paris **30** 1916 (286–298) pl. vii. **193**

Mercier, L. *vide* Mathis, C.

Mesnil, F. and **Roubaud,** E. Sur la sensibilité du chimpanzé au paludisme humain. Paris C. R. Acad. Sci. **165** 1917 (39–41). **194**

Metalnikoff, S. Sur l'immortalité des Protozoaires. Paris C. R. Soc. Biol. **80** 1917 (241–244). **195**

Metalnikov, S. Sur la digestion intracellulaire chez les Protozoaires (la circulation des vacuoles digestives). Ann. Inst. Pasteur Paris **30** 1916 (427–445) pls. viii and ix. **196**

Middleton, A. R. Heritable variations and the results of selection in the fission rate of *Stylonychia pustulata.* J. Exp. Zool. Philadelphia **19** 1915 (451–503). **197**

Minchin, E. A. (the late). The evolution of the cell. Amer. Nat. New York **50** 1916 (1–38 106–118 271–283). **198**

Moore, A. R. The mechanism of orientation in *Gonium.* J. exp. Zool. Philadelphia **21** 1916 (431–432). **199**

Morgan, J. F. The staining of soil-Protozoa. Lansing Rep. Michigan Acad. Sci. **17** 1915 (1916) (25–27) pl. iii. **200**

Mouzels, P. *vide* Leger, M.

Nöller, W. Blut- und Insektenflagellatenzüchtung auf Platten. Arch. Schiffshyg Leipzig **21** 1917 (53–95). **201**

Noguchi, H. *vide* Ohira, T.

Nowlin, Nadine. *Entamoeba buccalis* I. Its multiplication and periodicity. J. Parasitol. Urbana (Ill.) **3** 1917 (143–149). **202**

Nowlin, Nadine. *Entamoeba buccalis.* II. Its reactions and food-taking. J. Parasitol. Urbana (Ill.) **4** 1917 (21–24). **203**

Nowlin, Nadine and **Smith,** Inez. The intracellular development of a Gregarine, *Frenzelina ampelisca* n. sp. J. Parasitol. Urbana (Ill.) **4** 1917 (83–88). 1 pl. **204**

O'Connor, F. W. *vide* Wenyon, C. M.

O'Farrell, W. R. *vide* Chalmers, A. J.

Ohira, Tokuzo, and **Noguchi,** H. The cultivation of *Trichomonas* of the human mouth (*Tetratrichomonas hominis*). J. exp. Med. New York **25** 1917 (341–347) pls. xxxiv–xxxvii. **205**

Omar, Neschat *vide* Ata, Arif.

Ostenfeld, C. H. Catalogue des espèces de plantes et d'animaux observées dans le Plankton recueilli pendant les Expéditions depuis le mois de Juillet 1908 jusqu'au mois de Décembre 1911. Copenhagen Publ. de Circ. **70** 1916 (1–87). **206**

Papworth, A. G. The biology of *Arcella*. Lansing Rep. Michigan Acad. Sci. **19** 1917 (67–76). **207**

Pavillard, J. Un Flagellé pélagique aberrant, le *Pelagorhynchus marinus*. Paris C. R. Acad. Sci. **164** 1917 (238–241). **208**

Pavillard, J. Protistes nouveaux ou peu connus du plankton méditerranéen. Paris C. R. Acad. Sci. **164** 1917 (925–928). **209**

Pekkola, Waino *vide* Chalmers, A. J.

Penard, E. Observations sur quelques Protozoaires peu connus ou nouveaux. Rev. Suisse Zool. Genève **25** 1917 (1–33) pls. i and ii. **210**

Penard, E. Le genre *Loxodes*. Rev. Suisse Zool. Genève **25** 1917 (453–489). **211**

Penfold, W. J., **Woodcock,** H. M. and **Drew,** A. H. The excystation of *Entamoeba histolytica* (*tetragena*) as an indication of the vitality of the cysts. Brit. Med. J. London **1916** i (714 and 715). **212**

Penfold, W. J. *vide* Woodcock, H. M.

Playfair, G. I. Australian freshwater phytoplankton (*Protococcoideae*). Sydney N.S.W. Proc. Linn. Soc. **41** 1917 (823–852) pls. lvi–lix. **213**

Plimmer, H. G. (the late). Report on the deaths which occurred in the Zoological Gardens during 1915, together with a list of the blood-parasites found during the year. London Proc. Zool. Soc. **1916** (1916) (77–86). **214**

Plimmer, H. G. (the late). Report on the deaths which occurred in the Zoological Gardens during 1916, together with a list of the blood-parasites found during the year. London Proc. Zool. Soc. **1917** (1917) (27–35). **215**

Plough, H. The genus *Aspidisca*, Ehrenberg. Trans. Amer. Microsc. Soc. Decatur (Ill.) **35** 1916 (233–244). **216**

Ponselle, A. Déterminisme de la culture du Trypanosome de la grenouille, *Trypanosoma rotatorium* Mayer, 1843. Paris C. R. Soc. Biol. **80** 1917 (824–826 894). **217**

Porter, Annie. An enumerative study of the cysts of *Giardia* (*Lamblia*) *intestinalis* in human dysenteric fæces. Lancet London **1916** i (1166–1169). **218**

Porter, Annie *vide* Fantham, H. B.

Rennie, J. *vide* Anderson, J.

Roche, W. Intestinal Protozoa in Salonica war area. Lancet London **1917** i (297 and 298) also in London J.R.A.M.C. **27** 1917 (386–388). **219**

Rodhain, J. and van den **Branden,** F. Essais sur la pluralité des espèces flagellées parasitant le tube digestif des Invertébrés. Paris Bull. Soc. path. exot. **10** 1917 (811–814). **220**

Rogers, L. Disappearance of malignant tertian crescents from the blood, following the intravenous injection of tartar emetic. J. trop. Med. London **20** 1917 (20–21). **221**

Rogers, L. The bearing of Assam tea-garden experience on the problem of the etiology of Kala-Azar. Calcutta Ind. J. Med. Res. Suppl. vol. **5** 1914 (15–20). **222**

Root, F. M. *vide* Mast, S. O.

Rosewarne, D. *vide* Kennedy, A. M., also Worster-Drought, C.

Roubaud, E. Les Anophèles français, des régions non palustres, sont-ils aptes à la transmission du paludisme ? Paris C. R. Acad. Sci. **165** 1917 (401–403). **223**

Roubaud, E. Méthodes rapides pour les examens de sang paludéen en goutte épaisse. Paris Bull. Soc. path. exot. **10** 1917 (702 and 703). **224**

Roubaud, E. *vide* Mesnil, F.

Row, R. H. (the late). Protozoa. Zool. Record London **52 1915** (1917) (1–26). 225

Row, R. H. *vide* Cropper, J. W.

Row, R. On a simplified technique of Bass's method of cultivating malarial parasites *in vitro*, and a few observations on the malarial parasites cultured by this technique. Calcutta Ind. J. Med. Res. **4** 1917 (388–392) pls. xviii–xxiv and charts. 226

Russell, B. R. Intestinal disorders arising from Protozoan infection. Lancet London **1916** i (1161–1163). 227

Russell, D. G. *vide* Churchman J. W.

Russo, A. Il differenziamento dei gameti in *Cryptochilum echini* Maupas. Monit. Zool. Ital. Firenze **27** 1916 (74–77) pl. iii. 228

Schaeffer, A. A. On the reactions of Amoeba to isolated and compound proteins. J. exp. Zool. Philadelphia **22** 1917 (53–86) 6 pls. 229

Schaeffer, A. A. On the feeding habits of Amœba. J. exp. Zool. Philadelphia **20** 1916 (529–584) 6 pls. 230

Schaeffer, A. A. On the behaviour of Amoeba toward fragments of glass and carbon and other indigestible substances, and toward some very soluble substances. Biol. Bull. Woods Hole Mass. **31** 1916 (303–328) 8 pls. 231

Schaeffer, A. A. Reactions of Amoeba to light, and the effect of light on feeding. Biol. Bull. Woods Hole Mass. **32** 1917 (45–74) 6 pls. 232

Schaeffer, A. A. Concerning the species *Amœba proteus*. Science New York **44** 1916 (468 and 469) [*vide* Zool. Rec. *Protozoa* 1916 **187a**]. 233

Schein, H. Piroplasmose du cheval dans le Sud Annam. Paris Bull. Soc. path. exot. **10** 1917 (871 and 872). 234

Schiess, J. R. *vide* Swellengrebel, N. H.

Schöppler, H. Ueber eine pemphigusartige Erkrankung bei *Lacerta agilis* L. durch Gregarinen hervorgerufen. Centralbl. Bakt. Jena Abth. 1 Orig. **79** 1916 (27–29). 235

Schokhor, N. J. *vide* Yakimoff, W. L.

Schouteden, H. Notes sur quelques Chrysomonadines. Rev. Zool. africaine Bruxelles **6** 1917 (39–49). 236

Senevet, G. Note sur un procédé de coloration de l'Hématozoaire du paludisme. Paris Bull. Soc. path. exot. **10** 1917 (540–542). 237

Sergent, E. Sur des formes sans pigment ou à pigment très fin apparues chez le *Proteosoma* (*Plasmodium relictum* Gr. et Fel.) au cours de passages par canaris. Paris Bull. Soc. path. exot. **10** 1917 (448–450). 238

Sergent, E. Sur un *Leucocytozoon* de la perdrix rouge (*Perdix rubra* Brisson) de l'Algérie. Paris Bull. Soc. path. exot. **10** 1917 (701 and 702). 239

Sergent, E. and **Hempl,** H. Sur l'immunité dans le paludisme des oiseaux (*Proteosoma vel Plasmodium relictum* Gr. et Fel.). Paris Bull. Soc. path. exot. **10** 1917 (550–552). 240

Sherman, J. M. Studies on soil-Protozoa and their relation to the bacterial flora. 1 and 2. J. Bact. Baltimore **1** 1916 (35–66 165–185) tables. 241

Shortt, H. E. Notes on two Haemogregarines of cold-blooded Vertebrates. Calcutta Ind. J. Med. Res. **4** 1917 (402–413) pls. xxx and xxxi. 242

Shumway, W. Effect of thyroid on division rate of *Paramœcium*. J. Exp. Zool. Philadelphia **17** 1914 (297–314). 243

Shumway, W. The effects of a thyroid diet upon *Paramœcium*. J. exp. Zool. Philadelphia **22** 1917 (529–563). 244

Skupienski, F. X. Sur la sexualité chez les champignons Myxomycètes. Paris C. R. Acad. Sci. **165** 1917 (118–121). 245

Smith, B. Notes on *Pleodorina californica* Shaw. Lansing Rep. Michigan Acad. Sci. **18** 1916 (1917) (99–101). 246

Smith, Malins and **Matthews,** J. R. Further records of the occurrence of intestinal Protozoa in non-dysenteric cases. Ann. Trop. Med. Parasitol. Liverpool **11** 1917 (183–193). 247

Smith, A. Malins and **Matthews,** J. R. The intestinal Protozoa of non-dysenteric cases. Ann. Trop. Med. Parasitol. Liverpool **10** 1917 (361–390). 248

Smith, A. Malins *vide* Carter, Henry, also Yorke, W.

Smith, Inez *vide* Nowlin, N.

Smith, T. and **Smillie,** E. A note on Coccidia in sparrows and their assumed relation to blackhead in turkeys. J. exp. Med. New York **25** 1917 (415–420). **249**

Stephens, J. W. *vide* Carter, Henry, also Fantham, H. B.

Stocking, Ruth J. Variation and inheritance in abnormalities occurring after conjugation in *Paramœcium caudatum.* J. Exp. Zool. Philadelphia **19** 1915 (387–449). **250**

Strasser, W. *vide* Mavor, J. W.

Strong, R. M. Culture-media for *Paramœcium* and *Euglena.* Science New York **44** (N.S.) 1916 (238). **251**

Swellengrebel, N. H. Observations on *Blastocystis hominis.* Parasitol. Cambridge **9** 1917 (451–459) pls. xvi and xvii. **252**

Swellengrebel, N. H. and **Schiess,** J. R. Quelques remarques sur la morphologie de l'*Entamœba histolytica* et la valeur diagnostique de l'infection rectale des chats. Paris Bull. Soc. path. exot. **10** 1917 (13–17). **253**

Swellengrebel, N. H. and **Winoto,** R. M. The life-history of *Amoebae* of the *limax*-type in the human intestine. Parasitol. Cambridge **9** 1917 (266–273) pl. ii. **254**

Swezy, O. *vide* Kofoid, Ch.

Talbot, G. Pathogenic Protozoa. Ann. Rep. and Trans. Manchester Microsc. Soc. **1916** (1917) (66–86). **255**

Theobald, F. V. *vide* Fantham, H. B.

Thomson, J. D. Notes on malaria. London J.R.A.M.C. **29** 1917 (379–411) 1 pl. **256**

Thomson, J. G. and **Thomson,** D. Some observations on the effect of emetine administration on the free vegetative forms and cysts of *Entamœba histolytica* and *E. coli.* London J.R.A.M.C. **26** 1916 (683–694) 1 pl. **257**

Thomson, J. G. and **Thomson,** D. A preliminary note on the occurrence of peculiar bodies of probably Protozoan nature frequently found in the stools of dysenteric patients. London J.R.A.M.C. **27** 1916 (556–560) 1 pl. **258**

Tielemann, Eleonore *vide* Unna, P. G.

Tolosani, Olga. Osservazioni sul ciclo di *Monocystis michaelseni* Hesse. Monit. Zool. Ital. Firenze **27** 1916 (217–222) pls. ix and x. **259**

Tribondeau, L. et **Dubreuil,** J. Deux procédés pour la recherche rapide des croissants dans le sang des malades suspects de paludisme. Paris C. R. Soc. Biol. **80** 1917 (494 and 495). **260**

Turner C. A culture-medium for *Euglena.* Science New York **45** (N.S.) 1917 (239). **261**

Unna, P. G. and **Tielemann,** Eleonore. Zur Chemie der Amöben. Centralbl. Bakt. Jena **80** Orig. 1917 (66–89) 1 pl. **262**

Vinassa de Regny, P. Rocce e fossili dei dintorni di Grizzana e di Lagaro nel Bolognese. Roma Boll. Soc. Geol. ital. **19** 1900 (321–348) pl. iii. **262a**

Vivanti, Anna. Sulla *Crithidia inflata* n. sp., parassita nel tubo digerente del *Hygrotrechus najas.* Struttura e ciclo di sviluppo. Roma Rend. Acc. Lincei (5) **26** Sem. i 1917 (132–140 174–180) 2 pls. **263**

Wassilewsky, W. J. *vide* Yakimoff, W. L.

Watabiki, T. Une solution pour colorer des Protozoaires et des corpuscules du sang. Kitasato Arch. Exp. Med. Tokyo **1** 1917 (153–156). **264**

Watson, Minnie E. Studies on Gregarines, including descriptions of twenty-one new species and a synopsis of the Eugregarine records from the Myriapoda, Coleoptera and Orthoptera of the world. Illinois Biol. Monographs Urbana (Ill.) **2** No. 3 1916 (211–468) 15 pls. **265**

Watson, Minnie. Three new Gregarines from Crustacea. J. Parasitol. Urbana (Ill.) **2** 1916 (129–136) 1 pl. **266**

Watson, Minnie. A new Infusorian parasite in sand-fleas. J. Parasitol. Urbana (Ill.) **2** 1916 (145–146). **267**

Watson, Minnie. Observations on Polycystid Gregarines from Arthropoda. J. Parasitol. Urbana (Ill.) **3** 1916 (65–75) 1 pl. **268**

Watson, M. *vide* Kamm, M. W.

Welch, M. W. The growth of *Amoeba* on a solid medium for class use. Trans. Amer. Microsc. Soc. Decatur (Ill.) **36** 1917 (21–25). **269**

Wellings, A. W. *vide* Goodey, T.

Wenyon, C. M. The protozoological findings in 556 cases of intestinal disorder from the Eastern Mediterranean war area. London J.R.A.M.C. **26** 1916 (445–460). **270**

Wenyon, C. M. and **O'Connor,** F. W. The carriage of cysts of *Entamœba histolytica* and other intestinal Protozoa and eggs of parasitic worms by house-flies, with some notes on the resistance of cysts to disinfectants and other agents. London J.R.A.M.C. **28** 1917 (522–527). **271**

Wenyon, C. M. and **O'Connor,** F. W. An inquiry into some problems affecting the spread and incidence of intestinal Protozoan infections of British troops and natives in Egypt, with special reference to the carrier question, diagnosis and treatment of amoebic dysentery, and an account of three new human intestinal Protozoa. London J.R.A.M.C. **28** 1917 (1–34 151–187 346–370 461–492 557–565 686–698). 4 pls. **272**

Whitehead, H. On an epizoic Infusorian *Trichodina steinii* Cl. and L., found on Turbellaria. J. Quek. Microsc. Cl. London (2) **12** 1915 (545) **273**

Willis, H. S. The influence of the nucleus on the behaviour of *Amoeba*. Biol. Bull. Woods Hole Mass. **30** 1916 (253–270). **274**

Wilson, Ch. W. On the life-history of a soil-*Amoeba*. Berkeley Univ. Cal. Publ. Zool. **16** No. 16 1916 (241–292) pls. xviii–xxiii. **275**

Winoto, R. M. *vide* Swellengrebel, N.

Woodcock, H. M. Protozoological experiences during the summer and autumn of 1916. London J.R.A.M.C. **29** 1917 (290–300). **276**

Woodcock, H. M. and **Penfold,** W. J. Further notes on Protozoan infections occurring at the King George Hospital. Brit. Med. J. London **1916** i (407–409). **277**

Woodcock, H. M. *vide* Penfold, W. J.

Woodruff, Lorande Loss. Rhythms and endomixis in various races of *Paramoecium aurelia*. Biol. Bull. Woods Hole Mass. **33** 1917 (51–56). **278**

Woodruff, Lorande Loss. The influence of general environmental conditions on the periodicity of endomixis in *Paramoecium aurelia*. Biol. Bull. Words Hole Mass. **33** 1917 (437–462). **279**

Woodruff, Lorande Loss. Further light on the conjugation of *Paramœcium*. New York Proc. Soc. Exp. Biol. Med. **11** 1914 (64). **280**

Woodruff, Lorande Loss and **Erdmann,** Rh. Complete periodic nuclear reorganization without cell-fusion in a pedigreed race of *Paramœcium*. New York Proc. Soc. Exp. Biol. Med. **11** 1914 (73 and 74). **281**

Woodruff, Lorande Loss and **Erdmann,** Rhoda. A normal periodic reorganization process without cell-fusion in *Paramœcium*. J. Exp. Zool. Philadelphia **17** 1914 (425–517) 4 pls. **282**

Woodruff, L. L. *vide* Erdmann, Rh.

Worster-Drought, C. and **Rosewarne,** D. Amoebic dysentery in a man who had never left England. Brit. Med. J. London **1916** i (715 and 716). **283**

Wright, E. J. A case of urinary amoebiasis with cystitis. J. trop. Med. London **20** 1917 (145 and 146). **284**

Wurtz, R. and **Malleghem,** R. van. Accès graves chez des paludéens atteints de tierce dite bénigne. Paris C. R. Acad. Sci. **164** 1917 (797–799). **285**

Yakimoff, W. L. Parasites du sang des animaux en Transcaucasie. Paris Bull. Soc. path. exot. **10** 1917 (98–100). **286**

Yakimoff, W. L. *Prowazekia ninae kohl-yakimovi* n. sp. Paris Bull. Soc. path. exot. **10** 1917 (101). **287**

Yakimoff, W. L. *Trichomonas* de l'intestin de la sangsue du Turkestan (*Limnatis turkestanica*). Paris Bull. Soc. path. exot. **10** 1917 (293–294). **288**

Yakimoff, W. L. and **Schokhor,** N. I. Un Trypanoplasme et une Hémogrégarine du Silure. Rev. Zool. Russe Moscow 2 1917 (22–24). **289**

Yakimoff, W. L., **Schokhor,** N. J. and **Koselkine,** P. Maladies animales du Turkestan russe à parasites endoglobulaires. Paris Bull. Soc. path. exot. **10** 1917 (302–311). **290**

Yakimoff, W. L. and **Wassilewsky,** W. J. Essais biologiques sur le luargol (102 de Danysz). Traitement de la Dourine expérimentale des souris. Paris C. R. Soc. Biol. **80** 1917 (387 and 388). **291**

Yakimoff, W. L., Wassilewsky, W. J. and **Zwietkoff, N. A.** Sur la chimiothèrapie de la lambliose. Paris C. R. Soc. Biol. **80** 1917 (506 and 507). **292**

Yorke, W., Carter, H., Mackinnon, Doris, Matthews, J. R. and **Smith, Malins.** Persons who have never been out of Great Britain as carriers of *Entamoeba histolytica.* Ann. Trop. Med. Parasitol. Liverpool **11** 1917 (87–90). **293**

Yung, E. De l'explosion des Infusoires. Arch. Sci. Phys. Genève **35** 1913 (81 and 82). **294**

Zulueta, A. Promitosis y sindiéresis, dos modos de división nuclear coexistentes en Amebas del grupo *limax.* Madrid Trabaj. Mus. nat. ci. (Ser. Zool.) No. **33** 1917 (1–55) 2 pls. **295**

Zwietkoff, N. A. *vide* Yakimoff, W. L.

II.—SUBJECT INDEX.

COMPREHENSIVE AND GENERAL. 0403

Bibliography.

Row, 225.

Treatises, Collected Works.

Fantham, Stephens & Theobald, 85; Laveran, 151.

Addresses, Reviews.

Calkins, 26; Heron-Allen, 114; Manson, 173; Minchin, 198; Talbot, 255.

Economics.

PROTOZOA IN RELATION TO THE SOIL.

Hills, 118; Sherman, 241.

PROTOZOA IN RELATION TO DISEASE.

(a) *Amœbosis.* (See also under "Carriers" 0419).

Human intestinal: **Aragao, 10; Findlay, 89; Russell, 227; Wenyon, 270; Wenyon & O'Connor, 272; Woodcock, 276; Woodcock & Penfold, 277; Worster-Drought & Rosewarne, 283.**

Human, oral: **Goodey & Wellings, 98; Mendel, 193.**

Human, urinary: **Chalmers & O'Farrell, 32; Fantham, 79; Wright, 284.**

Liver-abscess: **Low, 163.**

(b) *Gregarinosis.*

Kamm, 134; Schöppler, 235.

(c) *Coccidiosis.*

Smith & Smillie, 249.

(d) *Malaria.*

Armand-Delille, 11; Chatton, 42; Delanoë, 59; Macfie & Ingram, 170; Wurtz & Malleghem, 285.

(e) *Piroplasmosis.*

Schein, 234.

(f) *Myxosporidiosis.*

Anderson, 7; Anderson & Rennie 8; Cox, 46.

(g) *Trypanosomosis.*

Macfie, 168.

(h) *Leishmaniosis.*

Fantham & Porter, 84; Iturbe & Gonzalez, 127.

(i) *Flagellosis.*

Flagellate diarrhœa: **Chalmers & Pekkola, 34; Chatterjee, 36; Cragg, 47; Fantham & Porter, 81 & 83; Hadley, 104; Kennedy & Rosewarne, 137.**

(j) *Balantidiosis.*

Manlove, 172.

(k) *Various and uncertain.*

Boynton, 19; Dimond, 60; Low & Dobell, 164.

Miscellaneous.

[Transmission—*Vide* 0419.]

Experimental infection, etc.

Anderson & Rennie, 8; Bouilliez, 18; Cornwall & Menon, 45; Fantham & Porter, 81 & 82; Hahn, 105; Laveran, 149; Mesnil & Roubaud, 194.

Cultivation.

Ata, Goldberg & Omar, 12; Drew & Griffin, 71; Dudgeon & Clarke, 73; Gordon, 99; Larue, 147 & 148; Nöller, 201; Ohira & Noguchi, 205; Penfold, Woodcock & Drew, 212; Ponselle, 217; Row, 226; Strong, 251; Turner, 261; Welch, 269; Woodcock, 276.

Technique.

Appel, 9; Boeck, 17; Carter & Matthews, 31; Cropper & Row, 51; Delanoë, 59; Donaldson, 65; Drew & Griffin, 71; Hance, 108; Inman, 125; Knowles & Cole, 141; Larue, 147; Manaud, 171; McLean, 191; Morgan, 200; Roubaud, 224; Row, 226; Senevet, 237; Tribondeau & Dubreuil, 260; Watabiki, 264.

STRUCTURE. 0407

Morphology and General Anatomy.

(a) of Sarcodina.

Dobell, 62; Dobell & Jepps, 64; Goodey & Wellings, 98; Keilin, 135; Knowles & Cole, 141; Mathis & Mercier, 182 & 183; Swellengrebel & Schiess, 253; Wenyon & O'Connor, 272; Woodcock, 276; Woodcock & Penfold, 277.

(b) of Sporozoa.

Macfie & Ingram, 170; Watson, 265, 266 & 268.

(c) of Mastigophora.

Chalmers & Pekkola, 33; Chatterjee, 37; Kofoid & Swezy, 142; Ohira & Noguchi, 205; Pavillard, 208; Wenyon & O'Connor, 272.

(d) of Ciliophora.

Calkins, 23; Ikeda, 124; Penard, 211.

Minute Structure; special anatomy.

(a) *Shell, envelope, etc.*

Papworth, 207.

(b) *Organellæ of locomotion.*

Mast & Lashley, 179.

(c) *Nucleus and cytoplasm.*

Alexeieff, 1–3, 6; Aragao, 10; Chatton, 39; Floyd, 90; Hance, 109; Kepner & Edwards, 138; Mast, 177; Mathis & Mercier, 186; Unna & Thielemann, 262.

(d) *Nuclear division and division mechanisms.*

Boeck, 16; Davis, 58; Dobell, 62; Tolosani, 259; Wilson, 275; Zulueta, 295.

PHYSIOLOGY. 0411

General, various.

Alexeieff, 4 & 5; Willis, 274.

Nutrition, excretion.

Hargitt & Fray, 110; Lund, 165; Mast & Lashley, 179; Mast & Root, 181; Penard, 211; Schaeffer, 230–232.

Locomotion.

Moore, 199.

Sense organs.

Harvey, 111; Mast, 177.

Depression-periods; Recuperation.

Erdmann & Woodruff, 76; Woodruff, 279; Woodruff & Erdmann, 282.

Immortality.

Metalnikoff, 195.

Environmental effects; response to stimuli.

Calkins, 24 & 25; Churchman & Russell, 43; Hance, 109; Hogue, 120; Hutchison, 122; Hyde & Spreier, 123; King, 139; Nowlin, 203; Schaeffer, 229–232; Shumway, 243; Wenyon & O'Connor, 271; Willis, 274; Woodruff, 279; Yung, 294.

Immunity.

Carnot, 27 & 28; Comandon, 44; Sergent & Hempl, 240.

Effects of reagents, etc.

Rogers, 221; Thomson & Thomson, 257; Yakimoff & Wassilewsky, 291; Yakimoff, Wassilewsky & Zwietkoff, 292.

REPRODUCTION AND LIFE-CYCLE. 0415

(a) MYCETOZOA.

Skupienski, 245.

(b) SARCODINA.

Amœbae.

Chatton, 41; Drew & Griffin, 71; Knowles & Cole, 141; Mathis & Mercier, 184 & 185; Nowlin, 202; Penfold, Woodcock & Drew, 212; Swellengrebel & Winoto, 254; Wilson, 275.

(c) SPOROZOA.

Gregarines.

Nowlin & Smith, 204; Tolosani, 259.

Coccidia.

Duboscq, 72; Léger & Duboscq, 154 & 155.

Hæmosporidia.

Brünn, 20; James, 130; Shortt, 242; Thomson, 256.

Myxosporidia.

Auerbach, 13; Davis, 58; Erdmann, 75; Georgévitch, 95–97; Hahn, 105–107; Kudo, 144 & 145; Mavor, 188.

Sarcosporidia.

Crawley, 49.

(d) MASTIGOPHORA.

Flagellates.

Chatton, 38; Hadley, 104; Lynch, 166; McCulloch, 190; Vivanti, 263.

(e) CILIOPHORA.

Ciliates.

Calkins, 23; Erdmann & Woodruff, 76; Greenaway, 101; Mast, 178; Russo, 228; Woodruff, 280; Woodruff & Erdmann, 282.

Various and uncertain.

Alexeieff, 6; Léger & Hollande, 157; Swellengrebel, 252.

ETHOLOGY. 0419

Bionomics; behaviour, habits.

Cornwall & Menon, 45; Hausmann, 112; Nowlin, 203; Papworth, 207; Schaeffer, 230–232.

Plankton.

Cunha & Fonseca, 55; Faria & Cunha, 86; Gran, 100; McMurrich, 192; Ostenfeld, 206; Pavillard, 209; Playfair, 213.

Parasitism.

(a) NATURAL TRANSMISSION; INFECTIVITY.

Evans, 78; Jack, 129; Léger & Hollande, 157; Rogers, 222; Roubaud, 223; Wenyon & O'Connor, 271; Woodcock, 276.

(b) CARRIERS.

Barratt, 14; Carter, Mackinnon, Matthews, Smith & Stephens, 29 & 30; Cragg, 47; Dobell, 63; Fantham, 80; Jepps, 132; Kennedy & Rosewarne, 136; MacAdam & Keelan, 167; Smith & Matthews, 247 & 248; Wenyon & O'Connor, 272; Woodcock, 276 & 277; Yorke, Carter, Mackinnon, Matthews & Smith, 293.

(c) LIST OF HOSTS.

Turbellaria (epizoic on).

Whitehead, 273.

Polychaeta.

Faria, Cunha & Fonseca, 87.

Hirudinea.

Yakimoff, 288.

Chaetognatha.

Ikeda, 124.

Crustacea.

Léger & Hesse, 156; Nowlin & Smith, 204; Watson, 266 & 267.

Insecta.

Galli-Valerio, 93; Ishiwata, 126; James, 131; Kamm, 133; Keilin, 135; King, 140; McCulloch, 190; Rodhain & van den Branden, 220; Vivanti, 263; Watson, 265 & 268.

Mollusca.

Léger & Duboscq, 154; Léger & Hollande, 157.

Hemichordata.

Léger & Duboscq, 155.

Tunicata.

Duboscq, 72.

Pisces.

Cunha & Fonseca, 54; Davis, 58; Georgévitch, 95; Jääskeläinen, 128; Hahn, 105–107; Kudo, 144 & 145; Mavor, 187 & 188; Mavor & Strasser, 189; Yakimoff, 286; Yakimoff & Schokhor, 289.

Amphibia.

Shortt, 242.

Reptilia.

Cunha & Fonseca, 53; Escomel, 77; Fonseca, 91; Galli-Valerio, 93; Léger & Mouzels, 159 & 160; Plimmer, 214 & 215; Schöppler, 235; Shortt, 242.

Aves.

Léger, 158; Léger & Mouzels, 162; Plimmer, 214 & 215; Sergent, 239.

Mammalia.

Chalmers & Pekkola, 33 & 34; Chatterjee, 37; Cunha, 52; Krempf, 143; Léger & Mouzels, 161; Marzinowsky, 174; Plimmer, 214 & 215; Yakimoff, 286; Yakimoff, Schokhor & Koselkine, 290.

VARIATION, PHYLOGENY. **0423**

Evolution.

Greenaway, 102.

Variation and Inheritance.

Heron-Allen & Earland, 117; Mast, 176; Mathis & Mercier, 182; Middleton, 197; Stocking, 250.

Classification, Phylogeny.

Crawley, 50; França, 92; Galli-Valerio, 94.

DISTRIBUTION (GEOGRAPHY). **0427**

[See also under "Parasitism," 0419.]

Geographical.

Europe.

Dixon, 61; Heron-Allen, 115; Heron-Allen & Earland, 116; Howard, 121; Lebour, 152 & 153; Penard, 210; Schouteden, 236.

Asia.

Cushman, 56.

America.

Beardslee, 15; Mavor, 187.

Geological.

Tertiary and Post-Tertiary.

Chapman & Gabriel, 35; Douvillé 66, 68 & 69; Hinde & Chatwin, 119; Vinassa de Regny, 262a.

Secondary.

Douvillé, 67 & 70; Lapparent, 146.

III.—SYSTEMATIC.

PROTOZOA, GENERAL. **0431**

Protozoa, fresh-water, Chile, notes, Bürger Anales Univ. Santiago **122** pp. 137–204 15 pls.

Protozoan parasites of man, Fantham Stephens & Theobald (Bale, Sons & Daniellson) **1916** pp. 25–120 text-figs. 1–119 and pp. 733–742 text-figs. 422 and 423.

1.—MYCETOZOA.

Didymium nigripes, sexual development, Skupienski C. R. Acad. Sci. **165** pp. 118–121.

Physarum carneum J. Lister & Sturgis, occurrence in Britain, notes, Howard J. R. Microsc. Soc. **1917** pp. 265–268 pl. xviii.

2. SARCODINA (= GYMNOMYXA).

Rhizopoda and Heliozoa, new or little known forms, neighbourhood of Geneva, described, Penard Rev. Suisse Zool. **25** pp. 1–33 pls. i & ii.

(a) Amœbaea (Reticulosa + Lobosa).

Amoebae, human parasitic, classification, Craig J. Med. Res. **35** pp. 425–442.

Amoeba (prob. *Vahlkampfia*) *buccalis* **sp. n.**, occurrence, morphology and phases of life-cycle, DREW & GRIFFIN J. R. Microsc. Soc. **1917** pp. 191–196 pls. xvi & xvii.—*A. verrucosoides* **sp. n.** Chile, BÜRGER Anales Univ. Santiago **122** p. 139 pl. i fig. 6.—*A.* spp., plankton Plymouth Sound, notes, LEBOUR J. Marine Biol. Ass. **11** p. 156 text-fig. 9.—*A.* human intestinal, of *limax*-type, life-history, SWELLENGREBEL & WINOTO Parasitol. **9** pp. 266–273 pl. ii.

Arcella, notes on behaviour, minute structure of shell, life-cycle, PAPWORTH Rep. Michigan Acad. Sci. **19** pp. 67–76. —*A. pseudarcella* **sp. n.** near Geneva, diagnosed, PENARD Rev. Suisse Zool. **25** p. 20 figs. 27, 28 & 39.

Corycia tessellata p. 17, figs. 16, 19, 22 & 23, *physalis* p. 18, figs. 24, 25, 29 & 30, **spp. n.**, diagnosed; PENARD Rev. Suisse Zool. **25**.

Entamoeba buccalis (*gingivalis*), described, GOODEY & WELLINGS Parasitol. **9** pp. 538–548 pls. xx & xxi.—*E. b.* multiplication, periodicity, NOWLIN J. Parasitol **3** pp. 143–149 **1** text-fig.—*E. b.* biology, NOWLIN op. cit. **4** pp. 21–24.—*E. coli*, schizogonic multiplication in, pp. 312–318, 15 figs., *E. histolytica*, absence of, in, p. 318, MATHIS & MERCIER Bull. Soc. path. exot. **10**.—*E. coli* and *E. histolytica*, comparison of "chromidial rods" in, MATHIS & MERCIER T.c. pp. 536–538.—*E. h.* (*dysenteriae*), question of races or mutations, MATHIS & MERCIER C.R. Soc. Biol. **80** pp. 791–793.—*E. h.* and *coli* compared with *E. cobayae*, CHATTON Bull. Soc. path. exot. **10** pp. 797–799 **3** text-figs.—*E. h.* & *E. coli*, cysts distinguished, BRUG T.c. pp. 799–803 **6** text-figs.—*E. h.*, liberation of, from cyst in intestine of cat, CHATTON Bull. Soc. path. exot. **10** pp. 834–840 **9** text-figs.—*E. h.* from urine, note, CHALMERS & O'FARRELL J. trop. Med. **20** pp. 97–100 **1** text-fig., also WRIGHT T.c. p. 145.—*E. h.* excystation, PENFOLD, WOODCOCK & DREW Brit. Med. J. 1916 pp. 714 & 715 **8** text-figs.—*E. h.* notes on, SWELLENGREBEL & SCHIESS Bull. Soc. path. exot. **10** pp. 13–17 **4** text-figs.—*E. h.* and *E. coli* cysts and the effects of emetine on, THOMSON & THOMSON J.R.A.M.C. **26** pp. 688–691 **1** pl.—*E. h.* and *E. coli*, notes on distinctions, pp. 47–71, *E. nana* **sp. n.** [probably this form should not be included in the genus *Entamoeba*], from Man, described, WENYON & O'CONNOR J.R.A.M.C. **28** pp. 89–92 pl. i figs. 10–23.—*E. h.*, *minuta* and *coli*, distinctions as seen in life, WOODCOCK J.R.A.M.C. **29** pp. 394–396. —*E. legeri* Mathis and *E. coli*, minutely compared, MATHIS & MERCIER Arch. Zool. exp. **56** N. et R. pp. 63–72 **22** text-figs.—*E. mesnili* **sp. n.** from larva of *Trichocera hiemalis*, notes, KEILIN C. R. Soc. Biol. **80** pp. 133–136 **1** pl.—*E. minuta*, distinct strain or variety of *E. histolytica*, cysts described, WOODCOCK & PENFOLD Brit. Med. J. **1916** pp. 407–409 **6** text-figs.—*E. serpentis* **sp. n.** from *Drymobius bifossatus* CUNHA & FONSECA Brazil Medico **31** p. 279.—*E.* the three common human intestinal, distinctions, DOBELL & JEPPS Brit. Med. J. **1917** i pp. 607–612 **14** text-figs.—*E.* human intestinal, comprehensive comparative account; *E. histolytica* and other types regarded as only different forms of the one species, *E. coli*, KNOWLES & COLE Ind. J. Med. Res. **4** pp. 498–610 pls. xxxix–xli.—*E.* of pyorrhœa, notes, MENDEL Ann. Inst. Pasteur **30** pp. 286–298 pl. vii.

Naegleria (or *Vahlkampfia*) cf. *gruberi*, account of life-cycle, flagellate phases, &c., WILSON Univ. Cal. Publ. Zool. **16** No. 16 pp. 241–292 pls. xviii–xxiii.

Placocysta lapponum **sp. n.**, occurrence and note, PENARD Rev. Suisse Zool. **25** p. 23 figs, 32–35.

Pseudodifflugia sylvarum **sp. n.**, Geneva, diagnosed; PENARD T.c., p. 22, figs. **26** and 31.

Vahlkampfia, vide Amoeba, Naegleria.

Wasielewskia gruberi (Schardinger) (syn. *A. punctata*) an *Amoeba* of the "*limax*"-type, modes of nuclear division, ZULUETA Trabaj. Mus. Nat. Ci. Ser. Zool. No. **33** pp. 1–55 **2** pls.

(b) Foraminifera.

Foraminifera, Philippines, diagnosed, CUSHMAN Proc. U.S. Nat. Mus. **51** pp. 651–662.

Foraminifera, systematic considerations and remarks, *á propos* d'Orbigny's work, HERON-ALLEN J. R. Microsc. Soc. **1917** pp. 1–105 pls. i–xiii.

†Foraminifera, Cretaceous and Eocene Central Thibet, described; DOUVILLÉ Palæont. ind. N.S. **5** Mem. **3** pp. 30–44, pls. xi–xv.

Ammodiscus incertus **var. n.** *discoideus*, Philippines, CUSHMAN Proc. U.S. Nat. Mus. **51** p. 652.

Anomalina polymorpha, **varr. nn.** *cervicornis*, *siphonifera*, Philippines, CUSHMAN T.c. p. 662.

Bathysiphon rufescens, *papyraceus* **spp. n.**, *flavidus* de Fol. **var. n.** *giganteus*, Philippines, CUSHMAN T.c. p. 651.

Chilostomella grandis **sp. n.** Philippines, CUSHMAN T.c. p. 662.

Cristellaria calcarata, *submamilligera* p. 657, *expansa*, and **var. n.** *planulata*, p. 658, *bradyi*, *cassinoides*, *dorsocostata*, p. 659, *tumido-costata*, and **var.. n.** *labyrinthica*, *paucicostata*, *helicina* p. 660, *helicinoides* p. 661, **spp. nn.** *C. cultrata* **var. n.** *decorata*, *rotulata* **var. n.** *umbonata* p. 656, *orbicularis* **varr. nn.** *subcarinata*, *subumbonata*, *papillata*, p. 657, *costata* **varr. nn.** *multicosta*, *subdecorata*, p. 658, *sublaevis* p. 659, *italica* **var. n.** *acutocarinata* p. 661, Philippines, CUSHMAN T.c.

Cyclammina compressa, *pauciloculata* **spp. n.** Philippines, CUSHMAN T.c. p. 653.

Dendrophrya attenuata **sp. n.** Philippines, CUSHMAN T.c. p. 652.

Globigerina aequilateralis **var. n.** *involuta* Philippines, CUSHMAN T.c. p. 662.

Haplophragmoides sphaeriloculum **sp. n.** Philippines, CUSHMAN T.c. p. 652.

†*Isolepidina pustulosa* **sp. n.** Tertiary, Trinity Isle (San Fernando); DOUVILLÉ C. R. Acad. Sci. **164** p. 843 6 text-figs.

†*Lepidorbitoides tibetica* p. 34 pl. xiv figs. 1–4, *polygonalis* p. 35 pl. xiv figs. 5 & 6, pl. xv figs. 1–3 **spp. n.** Cretaceous, Thibet, DOUVILLÉ, Palaeont. ind. **5** Mem. 3.—*L. t.* p. 134, and *L. p.* [given here as *polygonata* !] p. 135, brief mention, DOUVILLÉ, C. R. Acad. Sci. **165**.

Lingulina grandis **sp. n.** Philippines, CUSHMAN Proc. U.S. Nat. Mus. **51** p. 656.

Nodosaria antennula p. 653, *subpolygona*, *subscalaris* and **var. n.** *paucicostata*, *millettii*, p. 654, *substriatula*, *pauciloculata*, *subperversa*, p. 655, *laevicostata*, *spirostriolata* p. 656, **spp. nn.** *N. laevigata* **var. n.** *striatula*, *N. pyrula* **var. n.** *longicostata* p. 653, *lepidula* **var. n.** *hispidula* p. 654, Philippines, CUSHMAN T.c.

Nouria rugosa, **sp. n.** Faroe Channel, diagnosed, HERON-ALLEN & EARLAND J. R. Microsc. Soc. **1917** pp. 362–364 pl. xxiii.

†*Nummulites* **spp.** Tertiary (and Lower Eocene), Gulf of Aquitania, notes, DOUVILLÉ C. R. Acad. Sci. **165** pp. 531 & 532 & 609–615.

†*Orbitoides vredenburgi* **sp. n.** Cretaceous, Thibet, DOUVILLÉ Palaeont. ind. **5** Mem. 3 p. 32 pl. xi & C. R. Acad. Sci. **165** p. 134.

†*Pulvinulina tricarinata* Quereau *vide Rosalina.*

Rhabdammina abyssorum W. B. Carp. **var. n.** *radiata*, Philippines, CUSHMAN Proc. U.S. Nat. Mus. **51** p. 652.

†*Rosalina* (or *Globigerina*) *linnei* d'Orb. (= *Pulvinulina tricarinata* Quer.) Cretaceous, Alps & Pyrenees, note on; LAPPARENT C. R. Acad. Sci. **164** pp. 731–734 2 text-figs.

Saccammina sphaerica **var. n.** *catenula* Philippines, CUSHMAN Proc. U.S. Nat. Mus. **51** p. 652.

Siphogenerina bifrons **var. n.** *striatula*, *raphanus* **var. n.** *costulata*, Philippines, CUSHMAN T.c. p. 662.

Thurammina papillata Brady, p. 543 pl. xxvi figs. 1–13, **varr. n.**, *castanea* p. 545, pl. xxvi figs. 14–18, pl. xxix fig. 17, *parallela* p. 546 pl. xxvii figs. 14–17, *haeusleri* p. 547 pl. xxviii figs. 1–12 pl. xxix fig. 16, pl. xxx fig. 8, *murata* p. 549, pl. xxviii figs. 18–21, *sordida* p. 551, pl. xxx figs. 1–6, *hispida* p. 552, fig. 7, diagnosed, HERON-ALLEN & EARLAND J. R. Microsc. Soc. **1917**.

Vaginulina bradyi, *acicula* **spp. n.** Philippines, CUSHMAN Proc. U.S. Nat. Mus. **51** p. 661.

(c) Heliozoa

Monobia socialis **sp. n.** Chile, BÜRGER Anales Univ. Santiago **122** p. 151 pl. vii fig. 3.

Nuclearia amphizonellae **sp. n.**, Geneva, described, PENARD Rev. Suisse Zool. **25** p. 26 figs. 38, 40–44.

Oxnerella **gen. n.** (Aphrothoraca) *maritima* **sp. n.**, described, DOBELL Q. J. Microsc. Sci. **62** pp. 515–538 pl. xxvii.

Rhaphidiophrys schaudinnii **sp. n.** Chile, BÜRGER Anales Univ. Santiago **122** p. 155 pl. viii fig. 3.

Rhumbleria **gen. n.** (Chalarothoraca) *mirabilis* **sp. n.**, Chile, BÜRGER T.c. p. 156 pl. viii fig. 4.

(d) Radiolaria.

†Radiolaria, Tertiary, Bolognese Apennines, diagnosed, VINASSA DE REGNY Boll. Soc. Geol. Ital. **19** pp. 321–348 pl. iii.

†*Amphibrachium ovale* **sp. n.**, VINASSA T.c. p. 338 pl. iii fig. 16.

†*Cenosphaera scabra* p. 329 pl. iii fig. 1, *diasprina* p. 330 fig. 3, **spp. n.**, VINASSA Tc.

†*Chitonastrum* (?) *apenninicum* **sp. n.**, VINASSA T.c. p. 340 fig. 21.

†*Cyrtocapsa crassa* p. 344 fig. 42, *paronai* p. 345 fig. 43, **spp. n.**, VINASSA T.c.

†*Dicolocapsa elongata* **sp. n.**, VINASSA T.c. p. 342 fig. 37.

†*Dictyastrum diasprinum* **sp. n.**, VINASSA T.c. p. 338 fig. 20.

†*Dictyomitra bononiensis* **sp. n.**, VINASSA T.c. p. 343 figs. 39 & 40.

†*Dorysphaera lissanensis* p. 330 fig. 5, *porosissima* fig. 6, *clathrata* fig. 7 p. 331 **spp. n.**, VINASSA T.c.

†*Ellipsoxyphus lissanensis* **sp. n.**, VINASSA T.c. p. 334 fig. 12.

†*Hagiastrum irregulare* **sp. n.**, VINASSA T.c. p. 341 fig. 29.

†*Pipettella apenninica* p. 335 fig. 15, *bononiensis* fig. 14, *pantanellii* fig. 13 p. 334 **spp. n.**, VINASSA T.c.

†*Rhopalastrum capellinii* fig. 22, *lissanensis* fig. 23 p. 339, *clava* fig. 24 p. 340 **spp. n.**, VINASSA T.c.

†*Sethocapsa gutta* p. 341. fig. 33, *prunum* fig. 34, *hirta* fig. 35, p. 342, **spp. n.**, VINASSA T.c.

†*Staurodictya longispina* p. 336 figs. 26 & 27, *bononiensis* fig. 28, *dubia* fig. 36 p. 337 **spp. n.**, VINASSA T.c.

†*Staurosphaera gigas* **sp. n.**, VINASSA T.c. p. 333 fig. 32.

†*Stichocapsa ampulla* **sp. n.**, VINASSA T.c. p. 345 fig. 31.

†*Stichocorys pagoda* **sp. n.**, VINASSA T.c. p. 344 fig. 41.

†*Stylodictya* (?) *lissanensis* **sp. n.**, VINASSA T.c. p. 337 fig. 18.

†*Stylostaurus simplex* **sp. n.**, VINASSA T.c. p. 333 fig. 11.

†*Thecosphaera* (?) *aculeata* **sp. n.**, VINASSA T.c. p. 330 fig. 4.

†*Theosyringium robustum* **sp. n.**, VINASSA T.c. p. 343 fig. 30.

†*Trigonactura oligopora* fig. 19, *crassa* fig. 25 p. 335, **spp. n.**, VINASSA T.c.

†*Trisphaera* **gen. n.** (*Triposphaerida*) *elegans* pl. iii fig. 8, *aculeata* fig. 9 p. 332, *valida* p. 333 fig. 10, **spp. n.**, VINASSA T.c.

†*Xyphodictya bombiccii* **sp. n.**, VINASSA T.c. p. 336 fig. 17.

3. SPOROZOA.

Sporozoa from fishes, notes on, MAVOR Contrib. Canad. Biol. **1911–1914** pp. 25–38 5 text-figs.

(a) Gregarinidea.

Cephaline or Polycystid Gregarines of Myriapods, Coleoptera and Orthoptera, including new species, diagnoses, synonymy, records and list of hosts, WATSON Illinois Biol. Monographs **2** No. 3 pp. 211–468 15 pls.

Bulbocephalus **gen. n.** (*Stylocephalidae*) *wardi* p. 65 figs. 1–3, *elongatus* p. 66 figs. 4–6, **spp. n.**, occurrence and notes, WATSON J. Parasitol. **3**.

Frenzelina ampelisca **sp. n.** occurrence, intracellular development, NOWLIN & SMITH J. Parasitol. **4** pp. 83–88 1 pl.—*F. delphinia* p. 129 pl. i. figs. 1–8, *olivia* p. 133 figs. 8–10, *nigrofusca* p. 134 figs. 11–14, **spp. n.** from Crustacea, notes, WATSON *op. cit.* **2**.

Gregarina neglecta **sp. n.** occurrence and note, WATSON J. Parasitol. **3** p. 69 figs. 13–16.—*G. polymorpha*, occurrence in *Lacerta*, causing disease [the first recorded occurrence of a

Gregarine in a Vertebrate], SCHÖPPLER Centralbl. Bakt. Abth. 1 Orig. **79** pp. 27–29.—*G. udeopsyllae* from *Udeopsylla nigra* p. 117 figs. 260, 261, *platyni* from *Platynus ruficollis* p. 192 figs. 262–264, *coptotomi* from *Coptotomus interrogatus* p. 196 fig. 172, **spp. n.**, WATSON Illinois Biol. Monographs **2** No. 3.

Hirmocystis harpali **sp. n.** from *H. pennsylvanicus*, diagnosed, WATSON T.c. p. 168 figs. 265–268, 273 & 274.

Leidyana leidyi **sp. n.** occurrence and diagnosis, KAMM J. Parasitol. **4** p. 40 3 text-figs.

Monocystis michaelseni Hesse, nuclear division, formation of gametes, TOLOSANI Monit. Zool. ital. **27** pp. 217–222 pls. ix–x.

Pyxinia bulbifera **sp. n.** occurrence and note, WATSON J. Parasitol. **3** p. 67 figs. 7–12.

Selenidium cruzi **sp. n.** from *Polydora socialis*, FARIA, CUNHA & FONSECA Brazil Medico **31** p. 243.—*S. metchnikovi* **sp. n.** from *Glossobalanus minutus*, notes on early stages, LÉGER & DUBOSCQ Ann. Inst. Pasteur **31** p. 69 pl. iii.

Steinina harpali **sp. n.** from *H. pennsylvanicus*, WATSON Illinois Biol. Monographs **2** No. 3 p. 155 figs. 256–259, 269.

Stenophora dauphinia **sp. n.** for *S. juli* Lég & Duboscq, WATSON T.c. p. 57 fig. 9.—*S. lactaria* Watson, development of young stages, effect on host-cells, KAMM J. Parasitol. **3** pp. 124–130 2 pls.

(b) Coccidiidea.

Coccidium (?) *epidermica* p. 61 pl. i, *beauchampi* p. 66 pl. ii, **spp. n.**, from *Glossobalanus minutus*, early development described, LÉGER & DUBOSCQ Ann. Inst. Pasteur **31**.

Eimeria, vide Coccidium.

Pseudoklossia pectinis **sp. n.** from *Pecten maximus*, kidneys, phases in life-cycle, origin of *Adeleidae*, LEGER & DUBOSCQ Arch. Zool. exp. **56** N. et R. pp. 88–94 text-figs. 1–17.

Selysina gen. n. (allied to *Aggregatidae*) *perforans* **sp. n.** from an Ascidian, described, DUBOSCQ, C. R. Acad. Sci. **164** pp. 450–453.

(c) Haemosporidia.

Haemosporidian, endoglobular, non-pigmented, not regarded as a *Proteosoma*, from *Anas discors*, LEGER & MOUZELS Bull. Soc. path. exot. **10** pp. 699 & 700.

Haemosporidian parasites (undetermined) from a case of chronic fever, FEDOROVITCH Ann. Inst. Pasteur **30** pp. 249 & 250 pls. v & vi *p.p.*

Haemogregarina bornandi **sp. n.** from *Tropidonotus natrix*, GALLI-VALERIO Centralbl. Bakt. **80** Orig. p. 270 text-fig. 5.—*H. hominis* **sp. n.** from Chinese, described, KREMPF C. R. Acad. Sci. **164** pp. 965–967 4 text-figs.—*H. nucleobisecans* **sp. n.** from *Bufo melanostictus* pp. 408–412 pl. xxxi, *H.* sp. from *Agama tuberculata*, pp. 402–408, pl. xxx, notes on life-cycle, effects on host-cells, SHORTT Ind. J. Med. Res. **4**.—*H. phyllodactyli* **sp. n.** from *P. gerrhopygus*, note, ESCOMEL Bull. Soc. path. exot. **10** pp. 876–878 text-fig.—*H. turkestanica* **sp. n.** from *Silurus* **sp.**, YAKIMOFF & SCHOKHOR Rev. Zool. Russe **2** p. 24.—*H.* (*Hepatozoon*) *weinbergi* **sp. n.** in leucocytes of *Tupinambis nigropunctatus*, LEGER & MOUZELS Bull. Soc. path. exot. **10** pp. 283 & 284.—*H.* sp. indet., described from Man, associated with trench-fever, DIMOND Lancet **1917** ii pp. 382–384 8 diagrams.—Alleged Haemogregarine nature of the above, criticised, LOW also DOBELL T.c. p. 473.

Hepatozoon (syn. *Leucocytogregarina*) *ninae kohl-yakimovi* **sp. n.** from a fish (unspec.), YAKIMOFF Bull. Soc. path. exot. **10** p. 100.—[*H. vide etiam Haemogregarina.*]

Laverania malariae, crescents, minute structure and maturation changes, THOMSON J.R.A.M.C. **29** pp. 407 & 408 figs. 37–55.—*L. falciparum vide Plasmodium tenue.*

Leucocytozoon spp. from birds (*Corvus corax*, *Pica melanoleuca*, *Asio accipitrinus*), notes, host-cell is a mononuclear leucocyte, LÉGER Bull. Soc. path. exot. **10** pp. 28–33.—*L.* sp. resembling *L. ziemanni*, from *Perdix rubra*, SERGENT T.c. pp. 701 & 702 2 text-figs.

Malarial parasites, question of independence of the different species, ARMAND-DELILLE C. R. Acad. Sci. **165** pp. 202 & 203.—Malarial parasites,

nature of form responsible for true relapses, JAMES J.R.A.M.C. **29** pp. 319–322.—Malarial parasites in mosquito, resistance to cold, KING J. exp. Med. **25** pp. 495–498 pls. xxxviii & xxxix.—Cultivation of the three species, ROW Ind. J. Med. Res. **4** pp. 388–392 pls. xviii–xxiv.—Are the three recognised species only different clinical forms of one parasite? WURTZ & MALLEGHEM C. R. Acad. Sci. **164** pp. 797–799.

Nuttallia equi, in Southern Annam, note on, SCHEIN Bull. Soc. path. exot. **10** pp. 871 & 872.

Plasmodium carinii **sp. n.** from *Iguana nudicollis*, notes on [it appears debateable whether this parasite should be included in the genus *Pl.*], LÉGER & MOUZELS Bull. Soc. path. exot. **10** pp. 95–98.—*P. caucasicum* **sp. n.** from Man, compared with known human species, MARZINOWSKY Ann. Inst. Pasteur **30** pp. 243–248 pls. iv–vi.—*P. tenue* Stephens, a form of *Laverania falciparum*, MACFIE & INGRAM Ann. Trop. Med. Parasitol. **11** p. 10 pl. ii figs. 1–8.—*P. vivax*, expedited schizogony, BRÜNN Centralbl. Bakt. **79** Orig. pp. 84–89 1 pl.—*P. vivax*, Schaudinn's alleged parthenogenetic development in, really represents combination-forms (double infection of a cell), THOMSON J.R.A.M.C. **29** pp. 397–407 figs. 2–36.

Proteosoma relicta, forms with little or no pigment, in canaries, SERGENT Bull. Soc. path. exot. **10** pp. 448–450 text-figs.—*P. r.*, immunity of birds to, SERGENT & HEMPL T.c. pp. 550–552.

Theileria brimonti **sp. n.** from *Bradypus tridactylus*, LEGER & MOUZELS Bull. Soc. path. exot. **10** pp. 173–175.—*T. camelensis* **sp. n.** (Yak.), YAKIMOFF, SCHOKHOR & KOSELKINE Bull. Soc. path. exot. **10** p. 308.—*T. rossica* **sp. n.** from field-mouse, YAKIMOFF (& SAPHRONOWITSCH) Bull. Soc. path. exot. **10** p. 99.

(d) Myxosporidia (including Microsporidia).

Myxosporidian, undetermined [apparently a Microsporidian], causing disease in herrings, notes on, COX Contrib. Canad. Biol. **1914–1915** pp. 81–85 pls. viii & ix.

Ceratomyxa acadiensis **sp. n.** gall bladder of *Pseudopleuronectes americanus* and *Urophycis chuss*, described, MAVOR Contrib. Canadian Biol. **1911–1914** p. 27 pl. iv.—*C. herouardi* Georg., life-cycle, GEORGÉVITCH Arch. Zool. exp. **56** pp. 375–399 pls. xi–xiii.

Chloromyxum clupeidae **sp. n.** described, HAHN J. Parasitol **4** pp. 13–20.—*C. misgurni* p. 6 text-fig. 3, *fugitai* p. 7 fig. 4, **spp. n.**, occurrence and diagnoses, KUDO op. cit. **3**.

Glugea marionis Thél., structure of spore, GEORGÉVITCH Bull. Soc. Zool. France **42** pp. 106–107 4 text-figs.

Henneguya wisconsinensis **sp. n.** urinary bladder, *Perca flavescens*, notes, list of spp. of *H.* known, MAVOR & STRASSER Trans. Wisconsin Acad. Sci. **18** pp. 676–682 3 text-figs.

Leptotheca elongata Thél., occurrence and description, GEORGÉVITCH Bull. Soc. Zool. France **42** pp. 99–106 6 text-figs.

Myxidium gadi Georg., gall-bladder of *Gadus pollachia*, notes on life-cycle, GEORGÉVITCH C. R. Acad. Sci. **165** pp. 797–799.—*M. lieberkühni* from pike in N. America, notes, MAVOR Biol. Bull. **31** pp. 373–378 1 pl.—*M. striatus* **sp. n.** from *Menticirrhus americanus* and *Bairdella ronchus*, CUNHA & FONSECA Brazil Medico **31** p. 321.

Myxobolus musculi from *Fundus* spp., further notes on, experimental infection, HAHN J. Parasitol. **3** pp. 91–104 3 text-figs.—*M. m.*, stages in development, HAHN T.c. pp. 150–160 1 pl.—*M. pleuronectidae* **sp. n.** occurrence and note, HAHN T.c. p. 160 fig. 2.—*M. toyamai* **sp. n.** occurrence and developmental phases, KUDO T.c. pp. 163–170 2 pls.

Nosema apis, not regarded as the essential factor in the causation of Isle of Wight bee-disease, ANDERSON & RENNIE Proc. R. Physic. Soc. **20** pp. 23–61 pl. i.—*N.* sp. (prob. new) from *Attacus cynthia*, note on spores, ISHIWATA J. Parasitol. **3** pp. 136 & 137 8 text-figs.

Sphaerospora dimorpha **sp. n.** from *Cynoscion regalis*, cytology and life-cycle, DAVIS J. Morphol. **27** pp. 333–377 7 pls.

Thélohania giraudi sp. n. p. 14 text-figs. 4–6, *mülleri* L. Pfeiffer p. 13 figs. 1–3, occurrence and notes, LÉGER & HESSE C. R. Soc. Biol. **80**.

Zschokkella acheilognathi sp. n. Tokio, diagnosed, KUDO J. Parasitol. **3** p. 3 text-fig. 1.

(e) Actinomyxidia.

[Vacant.]

(f) Sarcosporidia.

Sarcosporidia, affinities with Cnidosporidia, GALLI-VALERIO J. Parasitol. **2** pp. 126–128.

Sarcocystis muris, sexual development in, CRAWLEY Proc. Acad. Sci. **68** pp. 2–43 pls. i–v.

(g) Haplosporidia.

[Vacant.]

SPOROZOA *INCERTAE SEDIS*.

[Various and uncertain.]

"*Anaplasma*" *marginale* Theiler, associated with disease in Philippine cattle, notes on, BOYNTON Philippine J. Sci. Sect. **B 12** pp. 281–291 3 pls.

Chytridiopsis ovicola sp. n. from eggs of oyster, description, LÉGER & HOLLANDE C. R. Soc. Biol. **80** pp. 61–64 4 text-figs.

Haemogregarine of trench fever regarded as an artificial body, HENRY Brit. Med. J. **1917** ii pp. 739 & 740.

4. MASTIGOPHORA.

(a) Flagellata.

Flagellates, various, mitochondria and "parabasal body" of, compared, ALEXEIEFF C. R. Soc. Biol. **80** pp. 358–361 16 text-figs. and T.c. pp. 499–502 18 text-figs.

Flagellates, intestinal, various, notes on, CHATTERJEE Ind. J. Med. Res. **4** pp. 393–401 pls. xxiv–xxix.

Flagellates, sp. incert., from human mouth in pyorrhœa, notes, DREW & GRIFFIN J. R. Microsc. Soc. **1917** pp. 189 & 190 pl. xv.

Flagellates, specificity of, for particular Insectan hosts, RODHAIN & VAN DEN BRANDEN Bull. Soc. path. exot. **10** pp. 811–814.

Bodo (syn. *Prowazekia*) *aquae* sp. n. (new specific name proposed with reservation), occurrence and morphology, MACFIE J. Trop. Med. **20** pp. 1–3 12 text-figs.—*B.* (syn. *P.*) *ninae kohlyakimovi* sp. n., YAKIMOFF Bull. Soc. path. exot. **10** p. 101.

Bodonidae, "*Blastocystis*" *enterocoela* Alex., a developmental phase of members of this family, CHATTON C. R. Soc. Biol. **80** pp. 555–560 1 pl.

Carteria scrobiculata p. 824 pl. lvi figs. 5–7, *australis* p. 825 pl. lvi fig. 9, spp. n., *C. australis* var. n. *ovata*, p. 825 fig. 10, diagnosed, PLAYFAIR Proc. Linn. Soc. N.S.W. **41**.

Chilomonas paramœcium, structure of nucleus, KEPNER & EDWARDS Biol. Bull. **31** pp. 213–219 6 text-figs.

Chlamydomonas lismorensis sp. n. pl. lvi. fig. 18 var. n. *ovata* figs. 19, 20, *C. monadina* var. n. *ovalis* p. 827 fig. 16, *C. globulosa* var. n. *pertusa* fig. 15, *C. pisiformis* varr. nn. *attenuata* fig. 13, *glœocystiformis* p. 826 fig. 14, freshwater plankton, Australia, PLAYFAIR Proc. Linn. Soc. N.S.W. **41**.

Chrysopyxis rousseaui sp. n. near Brussels, diagnosed, SCHOUTEDEN Rev. Zool. africaine **6** p. 40 text-fig. 1.

Crithidia euryophthalmi sp. n. from the bug *E. convivus* described, MCCULLOCH Univ. Cal. Publ. Zool. **18** No. 5 pp. 75–88 35 text-figs.—*C. inflata* sp. n. from intestine of *Hygrotrechus najas*, described, phases in life-cycle, VIVANTI Rend. Acc. Lincei (5) **26** Sem. i pp. 132–140 & 174–180 2 pls.

Enteromonas hominis from a British officer, causing illness, note on structure and systematic position, CHALMERS & PEKKOLA Bull. Soc. path. exot. **10** pp. 756–761 3 text-figs.

Lamblia intestinalis, division described, WENYON & O'CONNOR J.R.A.M.C. **28** p. 74 pl. ii figs. 1–5.—*L.* (*Giardia*) *microti*, mitosis described, BOECK Univ. Cal. Publ. Zool. **18** pp. 1–26 pl. i.

Leidya gen. n. (*Holomastigidæ* fam. n.) *metchnikovi* sp. n., a new Trichonymphid, diagnosed, FRANÇA Ann. Inst. Pasteur **30** p. 199.

Leishmania braziliensis Vianna, from Venezuela, note, ITURBE & GONZALEZ J. Parasitol. **4** pp. 44–47 1 fig.—

L. tropica, notes on morphology in inoculated animals, BOUILLIEZ Bull. Soc. path. exot. **10** pp. 66–86 1 text-fig.

Leptomonas (*Herpetomonas*) *polleniae* sp. n. from intestine of *P. rudis*, *scatophagae*, *pyrrhocoris*, notes on, GALLI-VALERIO Centrbl. Bakt. **79** Orig. pp. 41 & 42 text-fig. 1.

Microglena dispar sp. n. Belgium, SCHOUTEDEN Rev. Zool. africaine **6** p. 41 text-fig. 2.

Ochromonas massarti sp. n. Belgium, diagnosed, SCHOUTEDEN T.c. p. 42 text-fig. 3.

Octomitus hominis sp. n. described, CHALMERS & PEKKOLA J. trop. Med. **19** pp. 142–146 3 text-figs.

Pelagorhynchus gen. n. for *Rhynchomonas marinus* Lohm., Gulf of Lyons, described, PAVILLARD C. R. Acad. Sci. **164** pp. 238–241 9 text-figs.

Phacotus bullatus sp. n. p. 828 pl. lvi figs. 21, 22, var. n. *conicus* p. 828 fig. 23 diagnosed, PLAYFAIR Proc. Linn. Soc. N.S.W. **41**.

Pleodorina californica Shaw, notes, SMITH Rep. Michigan Acad. Sci. **18** pp. 99–101.

Pteromonas cruciata sp. n., with var. n. *pulchra*, p. 829 pl. lvi figs. 24–26, PLAYFAIR Proc. Linn. Soc. N.S.W. **41**.

Prymnesium saltans Massart, refound and described, SCHOUTEDEN Rev. Zool. africaine **6** p. 47 text-fig. 6.

Schizobodo nom. n. proposed for Flagellates of the genus *Heteromita* or *Prowazekella* (e.g., *S. tarentolae*), CHATTON C. R. Soc. Biol. **80** p. 559.

Trachelomonas andicola pl. ix fig. 3, *chilensis* fig. 5, spp. n., BÜRGER Anales Univ. Santiago **122** p. 160.

Tricercomonas gen. n. *intestinalis* sp. n. from Man described, WENYON & O'CONNOR J.R.A.M.C. **28** pp. 87 & 88 pl. iii figs. 1–11.

Trichomastix hominis sp. n. morphology, CHATTERJEE Ind. J. Med. Res. **5** pp. 217–221 pls. xxxii & xxxiii.—*T. saurii* sp. n. from *Amphisbaena* sp., FONSECA Brazil Medico **31** p. 305.

Trichomonas, notes on life-cycle and relation to host, HADLEY Amer. Nat. **51** pp. 209–224 12 text-figs.—*T.* (*Tetratrichomonas*) *buccalis* sp. n. (Goodey) occurrence and note, GOODEY & WELLINGS Parasitol. **9** pp. 554–557 pl. xxii.—*T.* (*T.*) *hominis*, from human mouth, morphology and behaviour on cultivation, OHIRA & NOGUCHI J. exp. Med. **25** pp. 341–347 pls. xxxiv–xxxvii.—*T. intestinalis*, formation of resistant cysts, LYNCH J. Parasitol. **3** pp. 28–33 12 text-figs.—*T. ninae kohl-yakimovi* sp. n. from *Limnatis turkestanica*, YAKIMOFF Bull. Soc. path. exot. **10** pp. 293 & 294.

Trypanophis grobbeni, note on structure, FLOYD Proc. R. Physic. Soc. **20** pp. 62–64 pl. ii.

Trypanoplasma ninae kohl-yakimovi sp. n. from *Silurus* sp., YAKIMOFF & SCHOKHOR Rev. Zool. Russe **2** p. 24.

Trypanosoma marocanum, distinct from *evansi*, *soudanense*, *berberum*, LAVERAN Bull. Soc. path. exot. **10** pp. 850–856.—*T.* sp., monomorphic (intermediate between *T. uniforme* & *T. vivax*) from human blood, Gold Coast, MACFIE Brit. Med. J. **1917** i pp. 12 & 13.

Waskia gen. n. *intestinalis* sp. n. from Man described, WENYON & O'CONNOR J.R.A.M.C. **28** pp. 84–86 pl. iv.—*W. wenyoni* sp. n. from *Cebus caraya*, FONSECA Brazil Medico **31** p. 417.

(b) Silicoflagellata.

[Vacant.]

(c) Dinoflagellata.

Dinoflagellates, plankton, Plymouth Sound, notes, LEBOUR J. Marine Biol. Ass. **11** pp. 183–200 14 text-figs.

Corbicula socialis, plankton, Gulf of Lyons described, PAVILLARD C. R. Acad. Sci. **164** p. 925 text-figs. 1–3.

Erythropsis, note on morphology and orientation, KOFOID & SWEZY Univ. Cal. Publ. Zool. **18** pp. 89–102 12 text-figs.

Exuviaella globosa p. 98, *perforata* p. 99, text-fig. 7, spp. n., North Sea plankton, GRAN Bull. plankt. Explor. mer. **1912**.

Cochlodinium pulchellum sp. n. Plymouth Sound, LEBOUR J. Marine Biol. Ass. **11** p. 197 text-fig. 14.

Gymnodinium viridis p. 189 text-fig. 4, *achromaticum* p. 190 fig. 5, *triangularis* p. 192 fig. 7, *minor* p. 192 fig. 8,

filum p. 193 fig. 9, **spp. n.**, Plymouth Sound, LEBOUR T.c.

Peridinium minusculum Pav., note, PAVILLARD C. R. Acad. Sci. **164** p. 927 text-figs. 6–9.

Spirodinium concentricum p. 194 text-fig. 11, *glaucum* p. 196 fig. 13, **spp. n.**, Plymouth Sound, LEBOUR J. Marine Biol. Ass. **11**.

Thaurilens **gen. n.** (allied to Peridinida ?) *denticulata* **sp. n.** occurrence and note, PAVILLARD C. R. Acad. Sci. **164** p. 926 text-figs. 4 & 5.

(d) Rhynchoflagellata.

[Vacant.]

5. CILIOPHORA (INFUSORIA).

(a) Ciliata.

Anoplophrya polydorae **sp. n.** from *P. socialis*, FARIA, CUNHA & FONSECA Brazil Medico **31** p. 243.

Aspidisca Ehrbg., systematic account of genus and species, PLOUGH Trans. Amer. Microsc. Soc. **35** pp. 233–244 15 text-figs.

Balantidium orchestium **sp. n.** from sand-fleas, note, WATSON J. Parasitol. **2** pp. 145 & 146 5 text-figs.

Cryptochilum echini, gametogony in, RUSSO Monit. Zool. ital. **27** pp. 74–77 pl. iii.

Cyttarocylis (*Coxliella*) *helicoidea* **sp. n.**, Rio de Janeiro, FARIA & CUNHA Mem. Inst. Oswaldo Cruz **9** p. 72 pl. xxvi figs. 5 & 6.—*C.* sp. incert. (near *ehrenbergi*), note on, MCMURRICH Contrib. Canad. Biol. **1915–1916** p. 4.

Didinium nasutum, structure and life history, CALKINS J. Exp. Zool. **19** pp. 225–241 1 pl.

Espejoia **gen. n.** (Holotricha) *obtusa* **sp. n.** Chile, BÜRGER Anales Univ. Santiago **122** p. 175 pl. xiv fig. 7.

Glaucoma paradoxa **sp. n.** Chile, BÜRGER T.c. p. 174 pl. xiv fig. 4.

Lacrymaria coniforme, pl. xi fig. 6, *elliptica* fig. 7 p. 167, *metabolica* fig. 9 p. 168, **spp. n.**, Chile, BÜRGER T.c.

Loxodes rostrum and *striatus*, description, question of specific distinctions, PENARD Rev. Suisse Zool. **25** pp. 453–489 12 text-figs.—*L.* sp. (prob. new), near *L. rostrum*, note, DARLING Trans. Amer. Micr. Soc. **35** pp. 64 & 65.

Metaphrya **gen. n.** (*Anoplophryiidae*) *sagittae* **sp. n.** from body-cavity of *Sagitta* described, IKEDA Annot. Zool. Japon. **9** pp. 317–324 6 text-figs.

Opercularia wallgreni **sp. n.** diagnosed, GRIER Trans. Amer. Microsc. Soc. **35** p. 138 pl. xix.

Paramœcium, recuperation by "endomixis," WOODRUFF & ERDMANN J. Exp. Zool. **17** pp. 425–517 4 pls.—*P.*, periodic reorganisation-process in, ERDMANN & WOODRUFF J. exp. Zool. **20** pp. 59–97 7 pls.—*P. nigrum* **sp. n.** Chile, BÜRGER Anales Univ. Santiago **122** p. 178 pl. xii fig. 3.

Prorodon rigidus pl. xi fig. 4, *espejoci* fig. 1 p. 169, **spp. n.**, Chile, BÜRGER Anales Univ. Santiago **122**.

Stegochilum acutum **sp. n.**, Chile, BÜRGER T.c. p. 177 pl. xiv fig. 5.

Strombidium armatum **sp. n.** Chile, BÜRGER T.c. p. 185 pl. xiii fig. 6.

Tintinnopsis prowazeki **sp. n.** Rio de Janeiro, FARIA & CUNHA Mem. Inst. Oswaldo Cruz **9** p. 71 pl. xxvi fig. 1.—*T. platensis* **sp. n.** South Atlantic, CUNHA & FONSECA T.c. p. 140 2 text-figs.

Trichodina steinii Cl. & L., note on, WHITEHEAD J. Quek. Microsc. Cl. (2) **12** p. 545.

(b) Tentaculifera (Suctoria).

[Vacant.]

PROTOZOA *INCERTAE SEDIS*.

Blastocystis enterocœla, minute structure, outline of life-cycle, affinities (regarded as a Blastomycete, allied to Saccharomycetes), ALEXEIEFF Arch. Zool. éxp. **56** (N. et R.) pp. 113–128 3 text-figs.—*B. hominis*, many stages described, regarded as a degenerative form assumed by more than one intestinal Protozoan parasite, SWELLENGREBEL Parasitol. **9** pp. 451–459 pls. xvi & xvii.—[*B.*, see under Flagellates, *Bodonidae*.]

Bodies occurring in stools of dysenteric patients described [several of the figs. suggest unusual forms of *Entamœbae*], THOMSON & THOMSON J.R.A.M.C. **27** pp. 556–560 1 pl.

III. PORIFERA OR SPONGIDA

ARRANGED BY

H. M. WOODCOCK, D.Sc. (Lond.).

CONTENTS

PAGE

I. Titles 2

II. Subject Index:—

General works, economics, and technique = 0603 .. 2

Anatomy = 0607 2

Physiology = 0611.. 3

Development and growth = 0615.. 3

Ethology = 0619 3

Variation, Phylogeny = 0623 3

Distribution, Geography = 0627 3

III. Systematic = 0631

Porifera, general 3

Calcarea 3

Non-Calcarea 3

Myxospongida (vacant)

Hexactinellida 3

Tetraxonida 3

Homosclerophora (vacant)

Astrotetraxonida 3

Sigmatotetraxonida 3

Lithistida (vacant)

Euceratosa (vacant)

Incertae sedis 4

I.—TITLES.

Bryce, D. On the spicular structure of a sponge, *Geodia japonica*. London J. Quek. Microsc. Cl. (2) **13** 1916 (193–195). **1**

Carr, J. W. The invertebrate fauna of Nottinghamshire. Nottingham (J. and H. Bell) **1916** 8 vo. (viii + 618). **2**

Dendy, A. The chessman spicule of the genus *Latrunculia*; a study in the origin of specific characters. (Presidential Address.) London J. Quek. Microsc. Cl. (2) **13** 1917 (231–246) pls. xv–xvii. **3**

Dendy, A. and **Nicholson, J. W.** On the influence of vibrations upon the form of certain sponge-spicules. London Proc. R. Soc. B **89** 1917 (573–587). **4**

Gravier, J. Sur l'association d'une éponge silicieuse, d'une anémone de mer et d'un Annélide Polychète des profondeurs de l'Atlantique. Paris C. R. Acad. Sci. **164** 1917 (333–336). **5**

Green, Bessie *vide* Smith, F.

Hallmann, E. F. A revision of the genera with microscleres included, or provisionally included, in the family *Axinellidae*; with descriptions of some Australian species. Part iii. Sydney N.S.W. Proc. Linn. Soc. **41** 1916 (1917) (634–675) with pls. **6**

Hallmann, E. F. On the genera *Echinaxia* and *Rhabdosigma* (Porifera). Sydney N.S.W. Proc. Linn. Soc. **42** 1917 (391–405) pls. xxi & xxii. **7**

Jorgensen, Olga M. Reproduction in *Grantia compressa*. Newcastle Rep. Dove Marine Lab. N.S. **6** 1916–1917 (1917) (26–32) 1 pl. **8**

Kindle, E. M. Notes on the bottom environment of the marine Invertebrates of Western Nova Scotia. Ottawa Nat. **30** 1917 (149–154). **9**

Linder, Ch. Culture des éponges. Arch. Sci. Phys. Genève **38** 1914 (207). **10**

Maluquer, J. Organitzacio i increment de la seccio oceanografica. Junta Ci. Nat. Barcelona **2** 1917 (203–238). **11**

Mather, K. F. The Trenton Fauna of Wolfe Island, Ontario. Ottawa Nat. **31** 1917 (33–40) pl. i. **12**

Nicholson, J. W. *vide* Dendy, A.

Row, R. W. [the late]. Porifera. Zool. Record London **52** 1915 (1917) (1–8). **13**

Schouteden, H. Mission Stappers au Tanganyika-Moero. Note sur les Spongilles. Rev. Zool. africaine Bruxelles **5** 1917 (166 & 167). **14**

Smith, F. and **Green,** Bessie. The Porifera, Oligochaeta and certain other groups of Invertebrates in the vicinity of Douglas Lake, Michigan. Lansing Rep. Michigan Acad. Sci. **17** 1915 (1916) (81–84). **15**

Stephens, Jane. Sponges collected by the dredging expeditions of the Royal Irish Academy and Royal Dublin Society. Dublin Proc. R. Irish Acad. **34** Sect. **B** 1917 No. 1 (1–16) pl. i. **16**

Topsent, E. Spongiaires. (In: Charcot, 2me expédition antarctique française, 1908–1910). Paris (Masson et Cie) 4to **1917** (1–88) 6 pls. **17**

Walcott, C. N. Cambrian geology and Palaeontology. IV. No. 2. The *Albertella*-fauna in British Columbia and Montana. Washington Smithsonian Misc. Coll. **67** No. 2 1917 (9–59) pls. 1–7. **18**

II.—SUBJECT INDEX.

GENERAL, ECONOMICS AND TECHNIQUE. **0603**

Bibliography.

Row, 13.

Museum Collections.

Maluquer, 11.

Spongiculture.

Linder, 10.

ANATOMY. **0607**

Skeleton.

Bryce, 1; Dendy, 3.

PHYSIOLOGY. 0611

Environmental Effects.

Dendy & Nicholson, 4.

DEVELOPMENT AND GROWTH. 0615

Reproduction.

Jorgensen, 8.

ETHOLOGY. 0619

Symbiosis.

Gravier, 5.

VARIATION, PHYLOGENY. 0623

Origin of specific Characters.

Dendy, 3.

Phylogeny.

Jorgensen, 8.

DISTRIBUTION (GEOGRAPHY). 0627

GEOGRAPHICAL (RECENT).

Europe.

Carr, 2; Stephens, 16.

America.

Kindle, 9; Smith & Green, 15.

Africa.

Schouteden, 14.

Australia.

Hallmann, 6 & 7.

Antarctic.

Topsent, 17.

GEOLOGICAL (FOSSIL).

Primary.

Mather, 12; Walcott, 18.

III.—SYSTEMATIC. 0631

PORIFERA, GENERAL.

Sponges, from the 2nd French Antarctic Expedition (Charcot), with new forms, described; TOPSENT **1917** pp. 1–88 6 pls.

CALCAREA.

Grantia compressa, germ-cells, development, affinities of Calcarea with Choanoflagellates; JORGENSEN Rep. Dove Marine Lab. **6** pp. 26–32 1 pl.

NON-CALCAREA.

(a) Myxospongida.

[Vacant.]

(b) Hexactinellida.

Aulorossella gaini Tops. p. 18 pl. v fig. 2, *aperta* Tops. p. 20 pl. iv fig. 4, pl. v fig. 3, Antarctic described; TOPSENT 2me Expéd. franç. **1917**.

Gymnorossella inermis Tops., Antarctic, p. 22 pl. i fig. 1 and pl. v fig. 4; TOPSENT T.c.

Rossella podagrosa Kirkp. **subsp. n.** *tenuis*; p. 15; TOPSENT T.c.—*R. racovitzae microdiscina* Tops.; TOPSENT T.c. p. 12 pl. iv fig. 10, pl. v fig. 5.

Sarostegia oculata, Cape Verde Isles, symbiotic association with an Actinian and a Polychaete; GRAVIER C.R. Acad. Sci. **164** pp. 333–336.

Scolymastra joubini Tops. p. 27 pl. ii fig. 4, pl. v fig. 1; TOPSENT 2me. Expéd. franç. **1917**.

(c) Tetraxonida.

(i) HOMOSCLEROPHORA.

[Vacant.]

(ii) ASTROTETRAXONIDA.

Geodia japonica, note on spicules; BRYCE J. Quek. Microsc. Cl. (2) **13** pp. 193 and 194.

(iii) SIGMATOTETRAXONIDA.

Allantella **gen. n.** for *Trachytedania arborea*, Keller; HALLMANN Proc. Linn. Soc. N.S.W. **41** p. 675.

Anchinoe toxifera subsp. *antarctica* Tops. p. 43 pl. iv. fig. 5 pl. vi. fig. 5; TOPSENT 2me Expéd. franç. **1917**.

Axidragma **gen. n.** for *Axinella padina* Tops., HALLMANN Proc. Linn. Soc. N.S.W. **41** p. 638.

Axinellidae, revision of genera with microscleres in; Australian species described; HALLMANN Proc. Linn. Soc. N.S.W. **41** pp. 634–675 pls. xxix, xxxii, xxxvii, and xxxix–xliv, *p.p.*

Axinectya **gen. n.** for *Axinella mariana* Ridl. and Dendy; HALLMANN op. cit. **42** p. 393.

Calyx stipitatus Tops. p. 81 pl. iv fig. 13, pl. vi fig. 24, TOPSENT 2mé Expéd. antarct. franç. **1917.**

Clathrissa glaberrima Tops. p. 46 pl. ii fig. 2, pl. vi fig. 3; TOPSENT T.c.

Dendoryx ramilobosa Tops. p. 47 pl. iii fig. 3, pl. vi fig. 6, described; TOPSENT T.c.

Desmoxya **gen. n.** for *Higginsia lunata* Carter, described; HALLMANN Proc. Linn. Soc. N.S.W. **41** p. 649 pl. xxix fig. 5, pl. xxxviii fig. 5, pl. xliv fig. 4.

Dragmacidon **gen. n.** for *Thrinacophora agariciformis* Dendy, and other forms; HALLMANN T.c. p. 639.

Dragmatella **gen. n.** for *Desmacella aberrans* Tops.; HALLMANN T.c. p. 640.

Echinaxia frondula (Whitelegge) described; HALLMANN op. cit. **42** pp. 391–398 pl. xxi figs. 3 and 4, pl. xxii.

Ephydatia fluviatilis, occurrence in Notts.; CARR Invertebrate Fauna of Notts. **1916** p. 2.

Forcepia fragilis **sp. n.**, occurrence and diagnosis; STEPHENS Proc. R. Irish Acad. **34** Sect. B p. 9 pl. i fig. 2.

Gelliodes spongiosus Tops. p. 74 pl. vi fig. 21, *benedeni* Tops. var. n. *fortior* p. 75 pl. ii fig. 1, pl. vi fig. 22; TOPSENT 2me. Expéd. antarct. franç. **1917.**

Gellius tremulus Tops. p. 79 pl. i fig. 7, pl. vi fig. 20, *tenellus* Tops. p. 80 pl. vi fig. 23; TOPSENT T.c.

Guitarra sigmatifera Tops. p. 71 pl. i fig. 6, pl. vi fig. 16; TOPSENT T.c.

Heterectya **gen. n.** for *Raspailia* (?) *villosa* Thiele; HALLMANN Proc. Linn. Soc. N.S.W. **42** pp. 393 and 394.

Homœodictya erinacea Tops. p. 68 pl. iii fig. 1, pl. vi fig. 15, *kirkpatricki* Tops. p. 70 pl. i fig. 2, pl. vi fig. 14; TOPSENT 2me Expéd. antarct. franç. **1917.**

Hymeniacidon torquata Tops. described, p. 40; TOPSENT T.c.

Laonania **nom. n.** proposed for generic names *Laothoë* and *Nœnia* (praeocc.); HALLMANN Proc. Linn. Soc. N.S.W. **41** p. 675.

Latrunculia apicalis and *bocagei*, chessman spicules and their formation; DENDY J. Quek. Microsc. Cl. (2) **13** pp. 231–246 pls. xv–xvii.

Microxina charcoti Tops. p. 73 pl. i fig. 3, pl. ii fig. 3, pl. vi fig. 17; TOPSENT 2me Expéd. antarct. franç. **1917.**

Mycale (*Paresperella*) *atlantica* **sp. n.** described, STEPHENS Proc. R. Irish Acad. **34** Sect. B p. 7 pl. i fig. 1.

Myxilla elongata Tops. p. 54 pl. iv fig. 3, pl. vi fig. 11 *magna* Tops. p. 56 pl. iii fig. 4, pl. vi fig. 9, *pistillaris* Tops. p. 57 pl. i fig. 5, pl. vi fig. 8; TOPSENT 2me Expéd. antarct. franç. **1917.**

Ophlitaspongia flabellata Tops.; TOPSENT T.c. p. 41 pl. i fig. 4, pl. vi fig. 2.

Paratimea **gen. n.** (*Spirastrellidae*), for *Bubaris constellata* Bowerb.; HALLMANN Proc. Linn. Soc. N.S.W. **41** p. 675.

Rhabdosigma mammillata (Whitelegge) descr., HALLMANN op. cit. **42** pp. 399–404 pl. xxi figs. 1 and 2.

Rhaphoxya **gen. n.** (*Axinellidae*) p. 641, *typica* **sp. n.** Port Phillip, described, p. 643 pl. xxix fig. 3, pl. xxxviii figs. 8, 9, pl. xxxix fig. 5, pl. xlii figs. 1, 2, *R.* (?) (*Raphisia*) *pallida* (Dendy), p. 646 pl. xxxiii fig. 6, pl. xliii figs. 1, 2; HALLMANN op. cit. **41.**

Strongylamma **gen. n.** for *Chondropsis carteri* Dendy; HALLMANN T.c. p. 643.

Stylopus fristedti Tops. p. 52; TOPSENT 2me Expéd. antarct. franç. **1917.**

Tedania oxeata Tops. p. 61 pl. iv fig. 14, pl. vi fig. 19; TOPSENT T.c.

Thrinacophora simplex Tops. p. 39 pl. iv fig. 12, pl. vi fig. 1, Antarctic, described; TOPSENT T.c.

Toxemna **gen. n.** for *Desmacella tubulata* (type) and *D. fragilis*; HALLMANN Proc. Linn. Soc. N.S.W. **41** p. 673.

(iv) LITHISTIDA.

[Vacant.]

(d) Euceratosa.

[Vacant.]

PORIFERA INCERTAE SEDIS.

†*Tholiasterella* (?) *hindei* **sp. n.** Cambrian, British Columbia, WALCOTT Smithson. Misc. Coll. **67** No. 2 p. 125 pl. iv fig. 1.

IV. COELENTERATA

ARRANGED BY

F. W. EDWARDS.

CONTENTS

	PAGE
I. Titles	2
II. Subject Index :—	
General and Miscellaneous = 0803	6
Structure = 0807	6
Physiology = 0811..	6
Development = 0815	6
Ethology = 0819	7
Variation and Phylogeny = 0823..	7
Distribution = 0827 :—	
Geographical	7
Geological	7
III. Systematic Index = 0831 :—	
Hydrozoa (= Hydromedusae)	8
Graptolithida	8
Scyphozoa (= Scyphomedusae)	8
Anthozoa :—	
Alcyonaria	8
Zoantharia	9
Ctenophora	10

I.—TITLES.

Badham, C. On a larval Actinian parasitic in a Rhizostome. London Quart. Journ. Microsc. Sci. **62** 1917 (221–230). **1**

Abendanon, E. C. *vide* Dollfus, G. F.

Bedot, M. Sur le genre *Kirchenpaueria*. Rev. Suisse Zool. Genève **24** 1916 (637–648). **2**

Bedot, M. Le genre *Antennella*. Rev. Suisse Zool. Genève **25** 1917 (111–129). **3**

Bedot, M. Le genre *Nemertesia*. Genève Mém. Soc. Phys. **39** 1 1916 (15–52). **4**

Bigelow, H. B. Explorations of the coast water between Cape Cod and Halifax in 1914 and 1915, by the U.S. Fisheries schooner *Grampus*. Oceanography and plankton. Bull. Mus. Comp. Zool. Harv. Coll. **61** 1917 (163–357). **5**

Broch, Hjalmar. Results of Dr. E. Mjöbergs Swedish scientific expeditions to Australia 1910–1913. 11. Alcyonaria. Stockholm Vet.-Ak. Handl. **52** No. 11 1916 (42) 4 pls. 62 text-figs. [0827 0831]. **6**

Broch, H. Hydroiduntersuchungen. iv. Beiträge zur Kenntnis der gonophoren der Tubulariiden K. Norske Vidensk. Sels. Skr. **1914** 1 No. 2 [1915] (1–17) 4 Taf. **7**

Broch, H. Hydroida (pt. 1). Copenhagen Danish Ingolf-Expeditions **5** 1916 (1–66) pls. i–ii. **8**

Carlgren, Oskar. Actiniaria and Zoantharia of the Danmark Expedition. København Medd. Grönl. **43** No. 19 1917 (505–507). [Also issued separately as Danmark-Exped. Grønlands Nordøstkyst. 1906–08 **3** 19, 1916]. **9**

Cary, L. R. The influence of the marginal sense organs on the rate of regeneration in *Cassiopea xamachana*. Philadelphia J. Exper. Zool. **21** 1916 (1–32). **10**

Cary, L. R. Studies on the physiology of the nervous system of *Cassiopea xamachana*. Washington D. C. Carnegie Inst. Year Book **15** 1916 [1917] (195–201). **11**

Cary, L. R. Observations upon the growth-rate and oecology of Gorgonians. Papers Tortugas Lab. Carnegie Inst. Washington **5** 1914 (79–90) pls. i–ii. **12**

Cary, L. R. The part played by *Alcyonaria* in the formation of some Pacific coral reefs. Washington D. C. Proc. Nat. Acad. Sci. **3** 1917 (545–548). **13**

Child, C. M. The gradient in susceptibility to cyanides in the meridional conducting path of the Ctenophore *Mnemiopsis*. Amer. J. Physiology **43** 1917 (87–112). **14**

Dehorne, *Mlle.* Yvonne. Note sur un Stromatopore nouveau du Lusitanien de Cezimbra (Portugal). Paris C. R. Acad. Sci. **164** 1917 (117). **15**

Dehorne, *Mlle.* Yvonne. Sur une espèce nouvelle de Stromatopore du calcaire à Hippurites: *Actinostroma kiliani*. Paris C. R. Acad. Sci. **164** 1917 (225–227). **16**

Dehorne, *Mlle.* Yvonne. Sur la presence du genre *Stromtoporella* Nicholson dans le Sénonien des environs de Martigues (Bouches-du-Rhône). Paris C. R. Acad. Sci. **165** 1917 (67–70). **17**

Dehorne, *Mlle.* Yvonne. A propos de la constitution microscopique du squelette des Stromatoporides. Paris C. R. Acad. Sci. **165** 1917 (764–767). **18**

Dehorne, Yvonne. Stromatopores du Givétien de Glageon (Nord). Paris Bull. Soc. géol. **16** 1916 [1917] (180–185) pl. v. **19**

†Dollfus, G. F. Paléontologie du voyage à l'île Célèbes de M. E. C. Abendanon. E. C. Abendanon, Geologische en geografische doorkruisingen van Midden-Celebs. Leiden (E. J. Brill) **3** 1917 (959–1016) 4 Taf. 28 cm. **19a**

Duncan, F. M. Some methods of preserving marine biological specimens. London J. R. Microsc. Soc. **1917** (521–529). **20**

Etheridge, R. *junr.* An Australian *Amphipora.* Sydney Rec. Austr. Mus. **11** 1917 (239–241) pls. xliv and xlv. **21**

Evans, W. *Obelia gelatinosa,* Pall., in the Firth of Forth. Scottish Nat. **62** 1917 (47). **22**

Faura y Sans, M. Sintesis estratigrafica de los terrenos primarios de Cataluna con una descripción de los yacimentos fossiliferos más principales. Madrid Mem. R. Soc. esp. Hist. Nat. **9** 1913 (1–202) lam. i–ix. **23**

Felix, J. Jungtertiäre und Quartäre Anthozoen von Timor und Obi. Aus J. Wanner : Paläontologie von Timor. Lief. 2. Stuttgart **1915** (43 p.) 2 Taf. **24**

Foerste, A. F. Upper Ordovician formations in Ontario and Quebec. Ottawa Canada Dept. Mines. Geol. Surv. Mem. **83** 1916 (1–279). **25**

Foerste, Aug. F. Notes on Silurian fossils from Ohio and other central States. Ohio Journ. Sci. **17** 1917 (187–204, 233–268) pls. viii–xii. **26**

Fourtau, R. Palaeontological notes. In: Hume, W. F. Report on the oilfields region of Egypt. Cairo Survey Dept. Geol. Rept. **1916** (82–94) pl. ix. **27**

Frech, F. Über die Verbreitung der *Calceola*formen in Asien. N. Jahrb. Min. Stuttgart **1916** 2 (45–46). **28**

Fuchs, A. Der Hunsrückschiefer und die Unterkoblentzschichten am Mittelrhein (Loreleigegend). 1.Tiel. Beitrag zur Kenntnis der Hunsrückschiefer und Unterkoblentzfauna der Loreleigegend. Berlin Abh. Geol. Landesanst. N. F. **79** 1915 (1–80) pls. i–xviii. [Includes descriptions (as new) and figures of some species diagnosed by the writer in 1899, 1901 and 1907]. **29**

Gravier, Ch. Sur un type nouveau d'Actinie de l'Ile San Thomé (Golfe de Guinéa). Bull. Mus. d'Hist. Nat. Paris **22** 1916 (234–236). **30**

Gravier, Ch. J. Sur l'association d'une Eponge silicieuse, d'une Anémone de mer et d'un Annelide polychète des profondeurs de l'Atlantique. Paris C. R. Acad. Sci. **164** 1917 (333–336). **31**

Gregory, J. W. Thomson's genera of Scottish Carboniferous corals. Glasgow Trans. Geol. Soc. **16** 1917 (220–243). **32**

Gregory, J. W. *Octotremacis,* its structure, affinities and age. London Geol. Mag. (6) **4** 1917 (9–12). **33**

Hargitt, George T. Germ cells of Cœlenterates. ii *Clava leptostyla.* J. Morph. Philadelphia Pa. **27** 1916 (85–93). **34**

Hargitt, G. T. Germ cells of Coelenterates. iii. *Aglantha digitalis.* iv. *Hybocodon prolifer.* J. Morph. Philadelphia **28** 1917 (593–642) 6 pls. **35**

Harvey, E. N. Studies on bioluminescence. vi. Light production by a Japanese Pennatulid, *Cavernularia haberi.* Amer. J. Physiology **42** 1917 349–358). **36**

Hatai, S. Changes in the chemical composition of starving *Cassiopea xamachana.* (Preliminary report.) Washington D. C. Carnegie Inst. Year Book **15** 1916 [1917] (206–207). **37**

Hatai, S. On the composition of the medusa, *Cassiopea xamachana,* and the changes in it after starvation. Washington D. C. Proc. Nat. Acad. Sci. **3** 1917 (22–24). **38**

Hayasaka, Ichiro. On a new Hydrozoan fossil from the Torinosu-limestone of Japan. Sendai Japan. Sci. Rep. Tohôku Imp. Univ. **4** 1917 (55–60) pl. xiv. **39**

Hilton, W. A. Notes on Coelenterates and Echinoderms from Laguna Beach. J. Ent. Zool. Claremont Calif. **8** 1916 (88–93). **40**

Jäderholm, Elof. Zoologische Ergebnisse der schwedischen Expedition nach Spitzbergen 1908 unter Leitung von Prof. G. De Geer, Teil 2 4. Die Hydroiden des Eisfjords. Stockholm Vet.-Ak. Handl. **54** No. 4 1916 (14) 1 textfig. **41**

Jäderholm, Elof. Results of Dr. E. Mjöbergs Swedish scientific expeditions to Australia 1910–1913. 12. Hydroiden. Stockholm Vet.-Ak. Handl. **52** No 12 1916 (9) 5 textfigs. **42**

Jimenez de Cisneros, D. Noticia acerca de algunos fósiles devónicos del Gabinete de Historia Natural del Colegio de Santo Domingo de Orihuela. Bol. Soc. Aragon. Ci. Nat. **16** 1917 (205–209). **43**

Jungersen, H. F. E. Alcyonarian and Madreporarian corals in the museum of Bergen, collected by the Fram-Expedition 1898–1902 and by the "Michael Sars" 1900–1906. Bergens Mus. Aarbok **1915–1916** 6 (1–44). **44**

Jungersen, Hector F. E. Alcyonaria, Antipatharia og Madreporaria. A conspectus of the Alcyonaria, Antipatharia and Madreporaria of Greenland. København Medd. Grønl. **23** 1917 (1153–1212). **45**

Jungersen, H. F. E. The *Alcyonaria* of East Greenland. Medd. Grönl. **43** No. 18 1917 (485–503). [Also separately as Danmark Exp. til Grönlands Nordöstkyst 1906–1908. **3** No. 18 (487–583)]. **46**

Kilian, W. et C. Sur une formation récifale à Stromatopores dans l'Urgonien de Chamechaude (massif de la Grande-Chartreuse). Grenoble Trav. Lab. Géol. **11** 1917 (70–73) 2 pls. **47**

Kramp, P. L. Hydroider The Hydroida of Greenland. København Medd. Grønl. **23** 1917 (951–1080). **48**

Kükenthal, W. System und Stammesgeschichte der Isididae. Zool. Anz. Leipzig **46** 1915 (116–124). **49**

Kükenthal, W. System und Stammesgeschichte der Plexauridae. Zool. Anz. Leipzig **48** 1917 (340–347). **50**

Lang, W. D. Homoeomorphy in fossil corals. London P. Geol. Ass. **28** 1917 (85–94). **51**

Lashley, K. S. Results of continued selection in *Hydra*. Philadelphia J. Exper. Zool. **20** 1916 (19–25). **52**

Latham, V. A. Mounting Zoophytes and *Polyzoa*. Trans. Amer. Micr. Soc. **34** 1915 (55–56). **53**

Lebour, Marie V. The Microplankton of Plymouth Sound from the region beyond the breakwater. Plymouth J. Mar. Biol. Ass. **11** 1917 (133–182). **54**

Leidhold, Cl. Devon Fossilien von der Bithynischen Halbinsel (Kleinasien). Berlin Zs. D. geol. Ges. **69** 1917 (308–347) Taf. xi–xiii. **55**

Loeb, G. and **Wasteneys,** H. A re-examination of the applicability of the Bunsen-Roscoe law to the phenomena of heliotropism. J. Exp. Zool. **22** 1917 (187–192). **56**

Loeb, J. and **Wasteneys,** H. The relative efficiency of various parts of the spectrum for the heliotropic re-actions of animals and plants. J. Exp. Zool. Philadelphia **19** 1915 (23–35) tables. **56a**

Maluquer, J. Organització i increment de la seccio oceanogràfica. Collections d' animals Marins. Junta Ci. Nat. Barcelona. **2** 1 1917 (216–238). **57**

Martin, K. Bemerkungen über sogenannt oligocäne und andere Versteinerungen von Celebes. Leiden Samml. Geol. Reichsmus. **2** 7 1917 (299–307 . **58**

Mayer, A. G. Nerve-conduction in *Cassiopea*. Washington D. C. Carnegie Inst. Year Book **15** 1916 [1917] (212–217). **59**

Mayer, A. G. Coral reefs of Tutuila, with reference to the Murray-Agassiz solution theory. Washington D. C. Proc. Nat. Acad. Sci. **3** 1917 (522–526). **60**

Mayer, A. G. Report upon the *Scyphomedusae* collected by the United States Bureau of Fisheries steamer "*Albatross*" in the Philippine Islands and Malay Archipelago. Washington D. C. Bull. U. S. Nat. Mus. **100** 1917 (171–233). **61**

Mietens, H. Sur la conservation des Siphonophores. Rev. Zool. Russe Moscou **1** 1916 (304). **62**

Milligan, H. N. *Sagartia parasitica* mounting on shells. Zoologist London **20** 1916 (39–40). **63**

Milligan, H. N. Opelet sea-anemone temporarily attached to shore-crab. Zoologist London **20** 1916 (80). **64**

Mørner, C. T. Über des Vorkommen von Brom in organischer Bindung innerhalb der Tierwelt. K. Norske Vidensk. Sels. Skr. **1914** 1 No. 3 (1–17). **65**

Nielsen, K. Brünnich. *Heliopora incrustans* nov. sp. With a survey of the Octocorallia in the deposits of the Danian in Denmark. København, Medd. Geol. **5** 8 1917 (1–13). **66**

Nomland, J. O. Corals from the Cretaceous and Tertiary of California and Oregon. Univ. Cal. Pub. Geol. **9** 1916 (59–76) pls. iii–vi. **67**

Nomland, J. O. New fossil corals from the Pacific Coast. Berkeley Cal. Univ. Cal. Pub. Geol. **10** 1917 (185–190) pl. v. **68**

Okada, Yo. Takokurage no undo ni tsuite. [On the movements of *Mastigias physophora.*] Dobuts. Z. Tokyo **29** 1917 (389–400). **69**

Okubo, Tadaharu. Hokkaido san jujisuiborui ichi shinzoku. (Preliminary note on a new genus of stauromedusae from Hokkaido). Dobuts. Z. Tokyo **29** 1917 (317–322). **70**

Openshaw, A. E. Notes on the reproduction of *Hydra.* Rep. Manchester Microsc. Soc. **1916** [1918] (46–49). **71**

Oppenheim, P. Ueber *Balanophyllia ponteni,* n. sp. aus dem Quartär der Strophaden und *Stephanophyllia schweinfurthi* n. sp. aus der obersten Kreide von Ober Aegypten. N. Jahrb. Min. Stuttgart **1917** 1 (1–8) Taf. i. **72**

Oppenheim, P. Über das Alter der Libyschen Stufe Zittel's und eine neue *Stephanophyllia* (*St. schweinfurthii* n sp.) aus der Blätterkonen des Danien in Ägypten. Stuttgart Centralbl. Min. 1917 (**41**–48 55–62). **73**

Oppenheim, P. Zur Geologie der Strophaden. Stuttgart Centralbl. Min. **1916** (221–229 254–260) **74.**

Ostenfeld, C. H. Catalogue des espèces de plantes et d'animaux observées dans le Plankton recueilli pendant les expeditions depuis le mois de Juillet 1908 jusqu'au mois de Decembre 1911. Copenhague Publ. de Circ. **70** 1916 (1–87) **75**

Park, J. On a new species of coral from the lower Oamaruian tuffs near Deborah, Oamaru. Wellington Trans. N. Z. Inst. **49** 1917 (396) pl. xxvii. **76**

Parker, G. H. and **Titus,** E. G. The structure of *Metridium* (*Actinoloba*) *marginatum* Milne-Edwards with special reference to its neuro-muscular mechanism. Philadelphia J. Exper. Zool **21** 1916 (433–460) 1 pl. **77**

Parker, G. H. The effector systems of Actinians. Philadelphia J. Exper. Zool. **21** 1916 (461–484). **78**

Parker, G. H. Nervous transmission in the Actinians. Philadelphia J. Exp. Zool. **22** 1917 (87–94). **79**

Parker, G. H. The movements of the tentacles in Actinians. Philadelphia J. Exp. Zool. **22** 1917 (95–110). **80**

Parker, G. H. Pedal locomotion in Actinians. Philadelphia J. Exp. Zool. **22** 1917 (111–124). **81**

Parker, G. H. Actinian behaviour. Philadelphia J. Exper. Zool. **22** 1917 (193–229). **82**

Parker, G. H. The power of suction in the sea-anemone *Cribrina.* Philadelphia J. Exper. Zool. **24** 1917 (219–222). **83**

Parker, G. H. The activities of *Corymorpha.* Philadelphia J. Exper. Zool. **24** 1917 (303–331). **84**

Parker, G. H. The responses of hydroids to gravity. Washington D. C. Proc. Nat. Acad. Sci. **3** 1917 (72–73). **85**

Place, J. A. The Morphology, structure and development of *Hydractinia polyclina.* Lancaster Pa. Trans. Amer. Microsc. Soc. **36** 1917 (83–91) pls. viii–ix. **86**

Poche, Franz. Über das System der Anthozoa und einige allgemeine Fragen der zoologischen Systematik. Zool. Anz. Leipzig **46** 1915 (6–16 33–43). **87**

Reed, F. R. C. Ordovician and Silurian fossils from Yunnan. Pal. Ind. Calcutta **6** 3 1917 (1–70) pls. i–viii. **88**

Richter, R. Zur stratigraphischen Beurteilung von *Calceola* (*Calceola sandalina* Lam. n. mut. *lata* und *alta*). N. Jahrb. Min. Stuttgart **1916** 2 (31–44) Taf. iii–vi. **89**

Robinson, W. J. The relationship of the Tetracoralla to the Hexacoralla. New Haven Conn. Trans. Connecticut Acad. Arts Sci. **21** 1917 (145–200). **90**

Roskine, G. La structure des prolongements musculaires de la cellule épithélio-musculaire de l'hydre. Paris C. R. Soc. biol. **80** 1917 (365–366). **91**

Ruedemann, R. Palaeontologic contributions from the New York state museum. Albany N.Y. Bull. State Mus. **189** 1916 (1–225) pls. i–xxxvi. **92**

Sánchez y Sánchez, M. Detalles nuevos sobre la estructura de los celenterados. Madrid Bol. Soc. Esp. Hist. Nat. **17** 1917 (217–221). **93**

Schulze, Paul. Einfache Methoden zur lebenswahren Fixierung von Actinien und Aplysia. Zool. Anz. Leipzig **44** 1914 (628–630). **94**

Smith, S. *Aulina rotiformis*, gen. et sp. nov., *Phillipsastraea hennahi* (Lonsdale), and *Orionastraea*, gen. nov. London Quart. Journ. Geol. Soc. **72** 1917 (280–307) pls. xxii–xxiv. **95**

Spittal, *Miss* M. K. Some hints on keeping *Hydra*. Southampton Proc. Hampshire Field Club **8** 1917 (100–103) 2 pls. **96**

Thomson, J. S. South African *Gorgonacea*. Manchester Mem. Proc. Lit. Phil. Soc. **61** 1917 (1–56) pls. i–v. **97**

Tilmann, N. Beiträge zur Geologie und Paläontologie von Südamerika. Die Fauna des unteren und mittleren Lias in Nord- und Mittel-Peru. N. Jahrb. Min. Stuttgart **41** 1917 (628–712) Taf. xxi–xxvi. **98**

Trechmann, C. T. The age of the Maitai series of New Zealand. London Geol. Mag. (6) **4** 1917 (53–64) pls. iv–v. **99**

Vaughan, T. W. Some corals from Kermadec Islands. Wellington Trans. N.Z. Inst. **49** 1917 (275–279) pls. xvii–xx. **100**

[**Vladimirskij,** A. P.] Владимірскій, А. П. Вліяніе нѣкоторыхъ факторовъ на регенеративные процессы у гидроидовъ. [The influence of some factors on regenerative processes in Hydroids.] Petrograd Trav. lab. zool. **4** 1915 (45–103+engl. summ. 104–107) 7 figs. **100a**

Wulff, R. Ein Beitrag zur Präparation fossiler Korallen. Centralbl. Min. Stuttgart **1916** (445–446). **101**

Yabe, H. and **Hayasaka,** I. Palaeozoic Corals from Japan, Korea and China. Tokyo J. Geol. Soc. **23** 1916 (65–83). **102**

Yakovlev, N. N. On the organisation of the Rugose corals and the origin of their characteristic peculiarities. London Geol. Mag. (6) **4** 1917 (108–115) pl. viii. **103**

Yatsu, Naohide. Notes on the physiology of *Charybdea rastonii*. Tokyo J. Coll. Sci. **40** art. 3 1917 (1–12). **104**

II.—SUBJECT INDEX.

GENERAL. 0803

Coral Reefs; **Mayer, 60**; **Cary, 13.**

Technique; **Mietens, 62**: **Schulze, 94**: **Latham, 53**: **Wulff, 101**: **Duncan, 20**: **Spittal, 96.**

"Fram" and "Michael Sars" Expeditions; **Jungersen, 44.**

STRUCTURE. 0807

Cytology, *Hydra*; **Roskine, 91.**

Sánchez y Sánchez, 93.

Hydractinia; **Place, 86.**

Stromatoporoids; **Dehorne, 18.**

Metridium marginatum; **Parker** and **Titus, 77.**

Octotremacis; **Gregory, 33.**

Rugosa; **Yakovlev, 103.**

Scyphomedusae; **Mayer, 61.**

PHYSIOLOGY. 0811

Power of suction in sea-anemones; **Parker, 83.**

Chemical comp.; **Mørner, 65**: **Hatai, 38.**

Heliotropism; **Loeb** and **Wasteneys, 56, 56a.**

Luminescence; **Harvey, 36.**

Response to gravity; **Parker, 85.**

Nerve transmission, Actinians; **Parker, 78, 79.** Nervous system, *Cassiopea*; **Cary, 11**; **Mayer, 59.** Sense organs and regeneration; **Cary, 10.**

Conducting paths; **Child, 14.**

Neuromuscular Mechanism, *Metridium*; **Parker and Titus, 77.**

Scyphomedusae; **Mayer, 61.**

Movements of *Mastigias*; **Okada, 69** of *Charybdea*, **Yatsu, 104**: of Actinians, **Parker, 80, 81.**

DEVELOPMENT. 0815

Columella; **Robinson, 90.**

Reproduction, *Hydra*; **Openshaw, 71.** Regeneration; **Vladimirskij. 100a**

Germ cells; **Hargitt, 34, 35.**

Gonophores; **Broch, 7.**
Hydractinia; **Place, 86.**
Scyphomedusae; **Mayer, 61.**

ETHOLOGY. 0819

Growth-rate; **Cary, 12.**
Parasitism, *Peachia hilli*; **Badham, 1.**
Symbiosis; **Gravier, 31.**
Habits, *Corymorpha*, **Parker, 84.**
Habits, sea anemones; **Milligan, 63, 64.**
Habits, *Scyphomedusae*; **Mayer, 61.**
Locomotion, actinians; **Parker, 81.**
Behaviour, *Mitridium*; **Parker, 82.**

AETIOLOGY. 0823

Homoeomorphy; **Lang, 51.**
Selection in *Hydra*; **Lashley, 52.**

DISTRIBUTION. 0827

1. Recent.

Arctic; **Jäderholm, 41.**
N. Atlantic; **Broch, 8: Ostenfeld, 75: Jungersen, 44–46.**
Scotland; **Evans, 22.**
England; **Letour, 54.**
Spain; **Maluquer, 57.**
C. Verde; **Kükenthal, 49.**
San Thomé; **Gravier, 30.**
W. Africa; **Kükenthal, 49.**
St. Paul I.; **Kükenthal, 49.**
S. Africa; **Thomson, 97.**
Japan; **Okubo, 70; Kükenthal, 49.**
E. Indies; **Kükenthal, 50.**
Philippine Is.; **Mayer, 61.**
Kermadec Is.; **Vaughan, 100.**
Australia; **Broch, 6.**
Australia; **Jäderholm, 42.**
Greenland; **Jungersen, 45, 46: Kramp, 48; Carlgren, 9.**
N. America, plankton; **Bigelow, 5.**
California; **Hilton, 40.**

2. Fossil.

Palaeozoic.
Spain; **Faura y Sans, 23.**

Ordovician.
Canada; **Foerste, 25.**

Silurian.
Ohio; **Foerste, 26.**
Ontario; **Ruedemann, 92.**
Yunnan; **Reed, 88.**
Australia; **Etheridge, 21.**

Devonian.
France; **Dehorne, 19.**
Spain; **Jimenez de Cisneros, 43.**
Germany; **Fuchs, 29.**
Asia, *Calecola*; **Frech, 28.**
Asia Minor; **Leidhold, 55.**

Carboniferous.
Scotland; **Gregory, 32.**
England; **Smith, 95.**
Japan and China; **Yabe and Hayasaka, 102.**

Permo-Carboniferous.
New Zealand; **Trechmann, 99.**

Jurassic.
Peru; **Tilmann, 98.**

Cretaceous.
France; **Dehorne, 16, 17.**
France; **Kilian, 47.**
Denmark; **Nielsen, 66.**
Egypt; **Oppenheim, 73.**
Japan; **Hayasaka, 39.**
California; **Nomland, 67.**

Tertiary.
Portugal; **Dehorne, 15.**
Greece; **Oppenheim, 72.**
Egypt; **Fourtau, 27.**
Java: **Gregory, 33.**
Timor; **Felix, 24.**
Celebes; **Dollfuss, 19a: Martin, 58.**
New Zealand; **Park, 76.**
California; **Nomland, 67, 68.**

III.—SYSTEMATIC. 0831

HYDROZOA (=HYDROMEDUSÆ).

Hydroida of Greenland, KRAMP, **48.**

Aglantha digitalis, HARGITT, **35.**

Antennella, revision, BEDOT, **3.**

†*Circoporella* **gen. n.** p. 57, for *semiclathrata* **sp. n.** Japan Cretaceous p. 58, HAYASAKA Sci. Rep. Tohôku Univ. **4.**

Clava leptostyla, HARGITT, **34.**

Corymorpha groenlandica, BROCH, **7.**—*C. palma*, PARKER **85.**

Crambessa mosaica parasitised by *Peachia* larvae, BADHAM **1.**

Hybocodon prolifer, HARGITT **35.**

Hydractinia polyclina, PLACE **86.**

Kirchenpaueria, revision, BEDOT **2.**

Nemertesia, monographic revision, BEDOT **4.**

Obelia gelatinosa, EVANS **22.**

Tubularia spp., BROCH **7.**

STROMATOPORIDAE.

Reef-forming, KILIAN, **47.**

†*Actinostroma clathratum*, DEHORNE, **19.**—†*A. kiliani* **sp. n.** S. France Cretaceous, DEHORNE C. R. Acad. Sci. **164** p. 227.

†*Amphipora australasica* **sp. n.** Australia Silurian, ETHERIDGE Rec. Austr. Mus. **11** p. 239.

†*Parallelopora capitata*, DEHORNE **19.**

†*Stromatopora choffati* sp. n. Portugal Tertiary, DEHORNE C. R. Acad. Sci. **164** p. 117.

†*Stromatoporella haugi* **sp. n.** France Cretaceous, DEHORNE C. R. Acad. Sci. **165** p. 70.

GRAPTOLITHIDA.

Species in Yunnan Silurian, REED **88,**

†*Airograptus* **gen. n.** for *Dictyonema furciferum*, RUEDEMANN Bull. N.Y. State Mus. **189** 1916 p. 20.

†*Inocaulis kirki* Ontario Silurian, RUEDEMANN Bull. N.Y. State Mus. **189** 1916 p. 17.

SCYPHOMEDUSÆ.

General Account; synopsis of Philippine species, many figd., MAYER **61.**

Cassiopea xamachana, HATAI **37.**

Mastigias physophora, OKADA **69.**

Sasakiella **gen. n.** (Lucernaridae) for *cruciformis* **sp. n.** Japan, OKUBO Dobuts. Z. Tokyo **29** 1917 p. 317.

ANTHOZOA.

Anthozoa of Greenland, JUNGERSEN, **45, 46.**

System der Anthozoa, POCHE **87.**

ALCYONARIA.

Palaeozoic Tetracoralla, ROBINSON **90.**

Acanella africana S. Africa, *japonica* Japan, *verticillata* Siberut I., **spp. n.**, KÜKENTHAL Zool. Anz. **46** 1915 p. 120.

Alcyonium spp. on Tutuila coral-reef, CARY **13.**

Anthothela parviflora **sp. n.** S. Africa, THOMSON Manchester Mem. Phil. Soc. **61** p. 3.

Anthothelidæ **fam. n.**, *Anthothelinæ* **subfam. n.**, Australia BROCH **6.**

Ceratoisis chuni St. Paul p. 121, *squarrosa* Japan, *rigida* St. Paul, *macrospiculata* C. Verde p. 122, **spp. n.**, KÜKENTHAL Zool. Anz. **46** 1915.

Calostylis, syst. position, ROBINSON **90.**

Cavernularia haberi, HARVEY **36.**

†*Dendrozoum* **gen. n.** *Favositidae* for *rhenanum* **sp. n.** Rhine Devonian, FUCHS Abh. geol. Landesanst. **79** 1915 p. 5.

Echinogorgia mertoni, abietina, sphaerophora p. 346, *gracillima* p. 347, **spp. n.** E. Indies, KÜKENTHAL Zool. Anz. **48.**

Eugorgia lineata **sp. n.** S. Africa, THOMSON Manchester Mem. Phil. Soc. **61** p. 39.

Eunephthya spp. synonymy, JUNGERSEN **46.**

Eunicella lata, densa **spp. n**, W. Africa, KÜKENTHAL Zool. Anz. **48** p. 342.

Euplexaura flabellata p. 42, E. (?) *kükenthali* p. 43, **spp. n.** Australia, BROCH Stockholm Vet.-Ak. Handl. 52 No. 11.

†*Favosites turbinatus*, RUEDEMANN **92.**

Gorgonia flabellum, CARY **12.**

†*Heliopora incrustans* **sp. n.** Denmark Cretaceous, NIELSEN Medd. Geol. **5** 8 p. 1.

Leptogorgia africana p. 28, *aurata* p. 32, **spp. n.** S. Africa, THOMSON Manchester Mem. Phil. Soc. **61.**

Leptoporidae fam. n. to include *Palaeacis* and allies, ROBINSON **90.**

Melitodes thomsoni **sp. n.** Australia, BROCH Stockholm Vet.-Ak. Handl. **52** No. 11 p. 26.—*M. fauvii* p. 6, *grandis* p. 8, **spp. n.** S. Africa, THOMSON Manchester Mem. Phil. Soc. **61.**

Mopsea squamosa nom. n. for *flabellum* Thoms., KÜKENTHAL Zool. Anz. **46** 1915 p. 124.

Mopsella fragilis p. 29, *rubinodis* p. 31, *dubia* p. 32, **spp. n.** Australia, BROCH Stockholm Vet.-Ak. Handl. 52 No. 11.—*M. singularis* **sp. n.** S. Africa, THOMSON Manchester Mem. Phil. Soc. **61** p. 10.

Muricellisis **gen. n.** *Isididae* for *echinata* **sp. n.** Japan, KÜKENTHAL Zool. Anz. **46** 1915 p. 124.

Nephthyigorgia kuekenthali **sp. n.** Australia, BROCH Stockholm Vet.-Ak. Handl. **52** No. 11 p. 9.

†*Pleurodictyum hunsrückianum* p. 4, *minimum* p. 5, **spp. n.** Rhein Devon, FUCHS Abh. geol. Landesanst. **79** 1915.

Plexaura flexuosa; CARY **12.**

Plexauridae revision, KÜKENTHAL **50.**

Plexauroides mikrodentata p. 36, *heterospiculata* p. 37, *mjöbergi* p. 38, *multispinosa* p. 39, P. (?) *monacanthus* p. 40, **spp. n.** Australia, BROCH Stockholm Vet.-Ak. Handl. **52** No. 11.

†*Plumalina plumaria* an Alcyonarian, RUEDEMANN **92** p. 10.

Stachyodes capensis **sp. n.** S. Africa, THOMSON Manchester Mem. Phil. Soc. **61** p. 25.

Stenogorgia borealis **sp. n.** Greenland, JUNGERSEN Medd. Grønl. **23** p. 1186. -S. *capensis* **sp. n.** S. Africa, THOMSON Manchester Mem. Phil. Soc. **61** p. 41.

Suberiopsis **gen. n.**, *australis* **sp. n.** Australia, BROCH Stockholm Vet.-Ak. Handl. **52** No. 11 p. 15.

Titanideum Mjoebergi **sp. n.** Australia, BROCH Stockholm Vet.-Ak. Handl. **52** No. 11 p. 18.

Umbellula encrinus synonymy, JUNGERSEN **46.**

Virgularia affinis fig., JUNGERSEN **46.**

Wrightella trilineata p. 13, *fragilis* p. 15, *furcata* p. 17, **spp. n.** S. Africa, THOMSON Manchester Mem. Phil. Soc. **61.**

ZOANTHARIA.

Thomson's genera, synonymy, GREGORY **32.**

†*Acervularia paveyi* **sp. n.** Ohio Silurian, FOERSTE Ohio J. Sci. **17** p. 198.

†*Arachnastræa* **gen. n.** aff. *Cyathophyllum* p. 76, *manchurica*, *coreanica* **spp. n.** Carboniferous p. 77, YABE & HAYASAKA J. Geol. Soc. Tokyo **23** 1916.

†*Astræopora occidentalis* **sp. n.** California Tertiary, NOMLAND Univ. Cal. Pub. Geol. **10** p. 187.

†*Astrangia insignifica* **sp. n.** California Pliocene, NOMLAND Univ. Cal. Pub. Geol. **9** 1916 p. 65.—†*A. boreas*, *grandis* **spp. n.** California Tertiary, NOMLAND Univ. Cal. Pub. Geol. **10** p. 186.

†*Astrocœnia lissóni* **sp. n.** Peru Jurassic, TILMANN N. Jahrb. Min. **41** p. 701.

†*Aulina* **gen. n.** *Phillipsastraeidae* for *A. rotiformis* **sp. n.** England Carboniferous, SMITH Q. J. Geol. Soc. **72** p. 290.

†*Balanophyllia variabilis* **sp. n.** California Eocene, NOMLAND Univ. Cal. Pub. Geol. **9** 1916 p. 66.—†*B. ponteni* **sp. n.** Greece Quaternary, OPPENHEIM Centralbl. Min. **1916** p. 223 and N. Jahrb. Min. **1917** 1 p. 1.

†*Calceola*, Verbreitung in Asien, FRECH, **28**; RICHTER **89.**

†*Calostylis parvula* **sp. n.** Ohio Silurian, FOERSTE Ohio J. Sci. **17** p. 200.

†*Caryophyllia oregonensis* **sp. n.** California Tertiary, NOMLAND Univ. Cal. Pub. Geol. **10** p. 187.

Combophyllum marianum, JIMENEZ DE CISNEROS **43.**

†*Cyathophyllum roadsi* **sp. n.** Ohio Silurian, FOERSTE Ohio. J. Sci. **17** p. 197.

†*Cyphastraea wanneri* **sp. n.** Timor Tertiary, FELIX Pal. v. Timor **2** 1915.—*C. serailia*, VAUGHAN **100.**

†*Cystophora* **gen. n.** aff. *Phillipsastraea* p. 78 type *manchurica* **sp. n.** China Carboniferous p. 79, *kikkawai* Korea p. 80, *dubia* Japan p 81, **spp. n.** Carboniferous, YABE & HAYASAKA J. Geol. Soc. Tokio **23** 1916.

†*Dasyphyllia brevicaulis* **sp. n.** Timor Tertiary, FELIX Pal. v. Timor **2** 1915.

†*Dendrophyllia californiana* **sp. n.** California Tertiary, NOMLAND Univ. Cal. Pub. Geol. **10** p. 188.—†*D. hannibali, tejonensis* **spp. n.** California Tertiary, NOMLAND Univ. Cal. Pub. Geol. **9** 1916 p. 67.

†*Flabellum* (?) *merriami* **sp. n.** California Eocene, NOMLAND Univ. Cal Pub. Geol. **9** 1916 p. 62.—*F. redmondianum*, FOERSTE **25**.

†*Fungia* (*Cycloseris*) *halophila* **sp. n.** Timor Tertiary, FELIX Pal. v. Timor **2** 1915.

†*Goniastraea grandiflora* **sp. n.** Timor Tertiary, FELIX Pal. v. Timor **2** 1915.—†*G. elegans* **sp. n.** Celebes Oligocene, DOLLFUS in E. C. Abendanon, Midden-Celebes **3** p. 1000.

Goniastraea benhami **sp. n.** Kermadec Is., VAUGHAN Trans. N.Z. Inst. **49** p. 277.

†*Goniopora vaughani* **sp. n.** California Eocene, NOMLAND Univ. Cal. Pub. Geol. **9** 1916 p. 68.

†*Grabauphyllum* **gen. n.** near *Acervularia* for *johnstoni* **sp. n.** Illinois Silurian, FOERSTE Ohio J. Sci. **17** p. 199.

†*Lithostrotion irregulare* var. n. *asiatica*, YABE & HAYASAKA J. Geol. Soc. Tokyo **23** 1916 p. 65.

†*Madripora solida* **sp. n.** California Pliocene, NOMLAND Univ. Cal. Pub. Geol. **9** 1916 p. 64.

Metridium marginatum, PARKER & TITUS **77**; PARKER **82**.

†*Octotremacis* Java Eocene; structure, affinities, GREGORY **33**.

†*Oculina oamaruensis* **sp. n.** New Zealand Tertiary, PARK Trans. N.Z. Inst. **49** p. 396.

†*Orbicella boehmi, craterophora* **spp. n.** Timor Tertiary, FELIX Pal. v. Timor **2** 1915.—*O. curta*, VAUGHAN **100**.

†*Orionastraea* **gen. n.** type *Sarcinula phillipsi* McCoy, SMITH Q. J. Geol. Soc. **72** p. 294.

Peachia hilli, parasitic larva, **Badham, 1**.

†*Phillipsastraea*, definition, genotype SMITH, **95**.

Pocillopora bulbosa, VAUGHAN **100**.

†*Polythecalis* **gen. n.** near *Lonsdaleia* p. 71, for *confluens* **sp. n.** China Carboniferous p. 73, YABE & HAYASAKA J. Geol. Soc. Tokyo **23** 1916.

Rugosa, YAKOVLEV **103**.

†*Siderastraea clarki* **sp. n.** California Oligocene, NOMLAND Univ. Cal. Pub. Geol. **9** 1916 p. 65.

†*Stephanophyllia californica* **sp. n.** California Eocene, NOMLAND Univ. Cal. Pub. Geol. **9** 1916 p. 66.—†*S. schweinfurthi* **sp. n.** Egypt Cretaceous, OPPENHEIM N. Jahrb. Min. **1917** 1 p. 1 and Centralbl. Min. **1917** p. 41.

†*Symphyllia molengraaffi* **sp. n.** Timor Tertiary, FELIX Pal. v. Timor **2** 1915.

Telmatactis **gen. n.** *Sagartiidae* for *valle-flori* **sp. n.** San Thomé, GRAVIER Bull. Mus. d'Hist. Nat. 1916 p. 234.

†*Thamnastraea abendanoni* **sp. n.** Celebes Oligocene, DOLLFUS in E. C. Abendanon, Midde-Celebes **3** p. 1000.—†*T. sinuata* **sp. n.** California Eocene, NOMLAND Univ. Cal. Pub. Geol. **9** 1916 p. 68.

Trochocyathus zitteli, FOERSTE **26**.

†*Trochocyathus imperialis, oregonensis* p. 63, *pergranulatus* p. 64, **spp. n.** California Eocene and Cretaceous, NOMLAND Univ. Cal. Pub. Geol. **9** 1916.

†*Trochurus welleri* Illinois, *halli* New York, **spp. n.** Silurian, FOERSTE Ohio J. Sci. **17** p. 254.

Turbinaria crater, VAUGHAN **100**.

†*Turbinolia dickersoni* p. 61, *pusillanima* p. 62, **spp. n.** California Eocene, NOMLAND Univ. Cal. Pub. Geol. **9** 1916.

†*Zaphrentis digoniata* **sp. n.** Ohio Silurian, FOERSTE Ohio J. Sci. **17** p. 194.

†*Zaphrentis* sp., TRECHMANN **99**.

CTENOPHORA.

Charybdea rastonii, YATOU **104**.

Mnemiopsis, conducting paths, CHILD **14**.

V. ECHINODERMA

ARRANGED BY

M. CONNOLLY.

CONTENTS.

	PAGE
I. Titles	4
II. Subject Index :—	
General = 1003 :—	
1. Historical	11
2. General treatises and Monographs	11
3. Bibliography	11
4. Pedagogy (vacant)	
5. Museums	11
6. Technique	11
7. Nomenclature	11
8. Local lists	11
Structure = 1007 :—	
1. General accounts	11
2. Symmetries (vacant)	
3. Homologies of classes	11
4. Skeletal tissue or Stereom (vacant)	
5. Skeletal anatomy	11
6. Hydrocoel, Respiratory organs, etc. (vacant)	
7. Other body cavities and their contents (vacant)	
8. Digestive system, Cuvierian organs	11
9. Nervous system and sense-organs	11
10. Mesodermal tissues .. .. } (vacant)	
11. Axial organ .. .. .. } (vacant)	
12. Generative organs and gonads } (vacant)	

PAGE

Physiology = 1011 :—

1. General (vacant)
2. Circulation (vacant)
3. Respiration 11
4. Alimentation 11
5. Excretion 11
6. Sensation 11
7. Experimental 11

Development = 1015 :—

1. General principles 11
2. General accounts (vacant)
3. Formation of gonads (vacant)
4. Oviposition, Fertilisation, Segmentation 11
5. Larval stages 12
6. Organogeny (vacant)
7. Post-larval growth-stages 12
8. Experimental embryology 12

Ethology = 1019 :—

1. General accounts (vacant)
2. Special habits 12
3. Habitat 12
4. Feeding 12
5. Defence and protection 12
6. Locomotion 12
7. Autotomy and regeneration 12
8. Parasites and commensals 12
9. Protection of young ..
10. Sexual dimorphism ..
11. Relation to other animals
12. Geological aspect ..
13. Phenology .. ..
14. Hybridization .. ..
} (vacant)
15. Echinoderms as food 12

Variation and Aetiology = 1023 :—

1. Variation in form 12
2. Variation in colour (vacant)
3. Variation, meristic, numerical (vacant)
4. Variation, meristic, homoeotic (vacant)
5. Variation, teratological 12
6. Variation, bionomic 12
7. Variation, mutational 12
8. Evolution 12
9. Relations to other phyla 12
10. Phylogeny 12

PAGE

Distribution = 1027 :—

A. Geographical—

i. General 12
ii. Atlantic Ocean, etc. 12
iii. Indian Ocean, etc. 12
iv. Pacific Ocean, etc. 12
v. Arctic Ocean, etc. 12
vi. Antarctic Ocean, etc. 12

B. Geological—

i. General 12
ii. Cainozoic—
(a) General 12
(b) Pleistocene 12
(c) Pliocene 12
(d) Miocene 12
(e) Oligocene 12
(f) Eocene 13

iii. Mesozoic—
(a) General 13
(b) Cretaceous (1. Upper; 2. Lower) 13
(c) Jurassic (1. Upper; 2. Lower) 13
(d) Lias (and Rhaetic) 13
(e) Trias 13

iv. Palaeozoic—
(a) General (vacant)
(b) Permian (vacant)
(c) Permo-Carboniferous (vacant)
(d) Upper Carboniferous 13
(e) Lower Carboniferous 13
(f) Devonian 13
(g) Silurian 13
(h) Ordovician 13
(k) Cambrian 13

III. Systematic Index = 1031 :—

A. General (vacant)
B. Holothurioidea 13
C. Echinoidea 13
D. Asteroidea 18
E. Ophiuroidea 22
F. Crinoidea 23
G. Cystidea and Edrioasteroidea 24
H. Blastoidea 24
K. Incertae sedis (vacant)

I.—TITLES.

[ANON.] William Bullock Clark. Nautilus Boston Mass. **31** 1917 (68–69). [03 1]. **1**

B, F. A. The classification of the brittle-stars (being a review of "A monograph of Japanese *Ophiuroidea*, arranged according to a new classification." By Hikoshichiro Matsumoto). Nature **100** 1917 (233). [31 E.] **2**

Bather, F. A. Le crinoïde du Trenton, *Ottawacrinus* W. R. Billings. Canada Minist. Mines Comm. geol. Mus. commem. Victoria B.C. Bull. **1** 1913 (1915) (1–12) pl. i. [27 B iv h; 31 F.] **3**

Bather, F. A. Note sur le genre *Merocrinus* Walcott. Canada Minist. Mines Comm. geol. Mus. commem. Victoria B.C. Bull. **1** 1913 (1915) (13–17). [27 B iv h; 31 F.] **4**

Bather, F. A. Illinois fossil invertebrates. I. *Atactocrinus*, a new crinoid genus from the Richmond of Illinois (pp. 239–41, pl. xv). II. Description of a Ste. Genevieve limestone fauna from Monroe County, Illinois (pp. 243–65, pls. xvi–xix) by Stuart Weller, being contributions from Walker Museum, Vol. I, No. 10, University of Chicago, April, 1916. Price 1s. net. Geol. Mag. London (6) **4** 1917 (132–133). [27 B iv d h; 31 F.] **5**

Bather, F. A. The base in the camerate monocyclic crinoids. Geol. Mag. London (6) **4** 1917 (206–212). [07 5; 31 F.] **6**

Bather, F. A. British fossil crinoids. XI. *Balanocrinus* of the London clay. Ann. Mag. Nat. Hist. London (8) **20** 1917 (385–407). [27 B ii f; 31 F.] **7**

Bell, A. The fossils of the East Anglian Sub-Crag boxstones. Geol. Mag. London (6) **4** (407–422) [Echinoderma p. 422.] [27 B ii c; 31 C D.] **8**

Bell, A. A list of type and figured specimens in the geological gallery, Ipswich Museum. Ipswich J. Ipswich Field Club **5** 1916 (1917) (41–49) [Echinoderma p. 45.] [03 5; 27 B ii c; 31 C.] **9**

Bell, F. J. Echinoderma. Part I. *Actinogonidiata*. Brit. Antarctic ("Terra Nova") Exp. 1910 Nat. Hist. Rept. Zool. **4** (1) 1917 (1–10). [27 A ii iv vi; 31 C D E F.] **10**

Boas, J. E. V. Zur Auffassung der Verwandtschaftsverhältnisse der Tiere. I. August Bang Kobenhagen **1917** 1917 (1–61) 2 pls. [15 1 5; 23 8 9; 31 B.] **11**

Brown, J. Coggin. Contributions to the geology of the province of Yünnan in western China. V. Geology of parts of the Salween and Mekong Valleys. Rec. Geol. Surv. India Calcutta **47** 1916 (205–266). [27 B i.] **12**

Brydone, R. M. The base of the chalk zone of *Holaster planus* in the Isle of Wight. Geol. Mag. London (6) **4** (245–249). [27 B iii b 1; 31 C.] **13**

Buscalioni, L. and Vinassa de Regny, P. Le pellicole di collodion nello studio dei fossili e dei minerali. Catania Atti. Acc. Gioenia Sci. Nat. **87** (3) 1910 (1–8). [03 6.] **14**

Cameron, J. and Gladstone, R. J. Structural continuity of the cell-elements in the blastoderm. London Anat. Soc. G. B. Proc. **1915** (1916) (12–13). [15 1 4 5; 31 C.] **15**

Chambers, R. Microdissection studies. II. The cell aster: a reversible gelation phenomenon. J. exper. Zool. Philadelphia Pa. **23** 1917 (483–504) 1 pl. [15 8; 31 C D.] **16**

Charpiat, M. Au sujet d'un essai de faune des Échinides fossiles des terrains secondaires. Paris Bull. Mus. Hist. Nat. **22** 1916 (449–450). [27 iii a.] **17**

Checchia-Rispoli, G. *Zuffardia* nuovo genere di echinide del Senoniano della Tripolitania. Roma Rend. Accad. Lincei (5) **26** 1917 (492–494) [27 B iii b 1; 31 C.] **18**

Child, C. M. Axial gradients in the early development of the starfish. Amer. J. Physiol. Baltimore **37** 1915 (203–219). [11 7; 15 4 5; 31 D.] **19**

Child, C. M. Experimental control and modification of larval development in the sea urchin in relation to the axial gradients. J. Morphology Philadelphia Pa. **28** 1916 (65–133) 8 pls. [15 5 8; 31 C D.] **20**

Clark, A. H. Three interesting additions to the crinoid fauna of Sagami Bay and Suruga Gulf, Japan. Washington D.C. Proc. Biol. Soc. **29** 1916 (105–108). [27 A iv; 31 F.] **21**

Clark, A. H. A new starfish from the Magellanic Region. Washington D.C. Proc. Biol. Soc. **30** 1917 (7). [27 A ii; 31 D.] **22**

Clark, A. H. Two new ophiurans from the China Sea. Washington D.C. Proc. Biol. Soc. **30** 1917 (13–16). [27 A iv; 31 E.] **23**

Clark, A. H. Four new echinoderms from the West Indies. Washington D.C. Proc. Biol. Soc. **30** 1917 (63–70). [27 A ii; 31 D E F.] **24**

Clark, A. H. Three new starfish and one new brittle-star from Chile. Washington D.C. Proc. Biol. Soc. **30** 1917 (151–158). [27 A iv; 31 D E.] **25**

Clark, A. H. Two new astroradiate echinoderms from the Pacific coast of Colombia, and Ecuador. Washington D.C. Proc. Biol. Soc. **30** 1917 (171–174). [27 A iv; 31 D.] **26**

Clark, H. L. Report on the sea-lilies, starfishes, brittle-stars and sea-urchins obtained by the F.I.S. "Endeavour" on the coasts of Queensland, New South Wales, Tasmania, Victoria, South Australia, and Western Australia. Commonwealth Austral. Dept. Trade & Cust. Fisheries Sydney N.S.W. **4** (1) 1916 (1–123) pls. i–xliv. [27 A iv; 31 C D E F.] **27**

Clark, H. L. Reports on the scientific results of the expedition to the tropical Pacific in charge of Alexander Agassiz, on the U.S. Fish Commission steamer "Albatross" from August, 1899, to March, 1900, Commander Jefferson F. Moser, U.S.N. commanding. XVIII.—Reports on the scientific results of the expedition to the eastern tropical Pacific in charge of Alexander Agassiz, on the U.S. Fish Commission steamer "Albatross" from October, 1904, to March, 1905, Lieut. Commander L. M. Garrett, U.S.N., commanding. XXX. *Ophiuroidea.* Bigelow Bull. Mus. Comp. Zool. Harvard Coll. **61** 1917 (429–453) pls. i–v. [27 A iv; 31 E.] **28**

Clark, H. L. The habits and reactions of a comatulid, *Tropiometra carinata.* Washington D.C. Carnegie Inst. Pub. **251** 1917 (111–119). [11 6; 19 3 4 6; 23 1 2; 31 F.] **29**

Clark, H. L. Hawaiian and other Pacific Echini. No. 2. The *Echinoneidae, Nucleolitidae, Urechinidae, Echinocorythidae, Calymnidae, Pourtalesiidae, Palaestomatidae, Aeropsidae, Palaeopneustidae, Hemiasteridae* and *Spatangidae.* Cambridge Mass. Mem. Mus. Comp. Zool. Harvard Coll. **46** 1917 (81–283) pls. cxliv–clxi. [27 A iv; 31 C.] **30**

Clark, T. H. New blastoids and brachiopods from the Rocky Mountains. Bigelow Bull. Mus. Comp. Zool. Harvard Coll. **61** 1917 (361–380) pl. i–ii. [27 B iv d; 31 H.] **31**

Conklin, E. G. Why polar bodies do not develop. Washington D.C. Proc. Nation. Acad. Sci. **1** 1915 (491–496). [15 8; 31 C.] **32**

Crozier, W. J. The orientation of a holothurian by light. Amer. J. Physiol. Baltimore **36** 1914 (8–20). [11 6; 19 6; 27 A ii; 31 B.] **33**

Crozier, W. J. A note on the physiology of the Cuvierian organs of *Holothuria captiva* Ludw. Amer. J. Physiol. Baltimore **36** 1915 (196–202). [11 5; 31 C.] **34**

Crozier, W. J. The rhythmic pulsation of the cloaca of holothurians. J. exper. Zool. Philadelphia Pa. **20** 1916 (297–356). [07 8; 11 4 6 7; 27 A ii; 31 B.] **35**

Crozier, W. J. Multiplication by fission in holothurians. Amer. Nat. New York N.Y. **51** 1917 (560–566). [15 4; 31 B.] **36**

Crozier, W. J. The behaviour of holothurians in balanced illumination. Amer. J. Physiology Baltimore U.S.A. **43** 1917 (510–513). [11 6; 31 B.] **37**

Crozier, W. J. Occurrence of a holothurian new to the fauna of Bermuda. (Contrib. Bermuda Biol. Stat. research No. 61.) Ann. Mag. Nat. Hist. London (8) **19** 1917 (405–406). [27 A ii ; 31 B.] **38**

Dickerson, R. E. and **Kew,** W. S. W. The fauna of a medial Tertiary formation and the associated horizons of Northeastern Mexico. San Francisco Proc. Calif. Acad. Sci. (4) **7** 1917 (125–156) pls. xvii–xxvia. [27 B ii d e ; 31 C.] **39**

Dickerson, R. E. and **Kew,** W. S. W. Tertiary mollusks and echinoderms from the vicinity of Tuxpan, Mexico. (Abstract.) Washington D.C. Bull. Geol. Soc. Amer. **28** 1917 (224–225). [03 8 ; 27 B ii d f] **40**

Döderlein, L. Die Asteriden der Siboga-Expedition. I. Die Gattung *Astropecten* und ihre Stammesgeschichte. Uitkomsten op zool. botan. ocean. geol. gebied versameld in Ned. Oost-Indie 1899–1900 aan boord H.M. Siboga onder commando van Lt. t-z. 1 Kl. G. F. Tydeman, uitgegeven door Dr. Max Weber. Lvr. 81 Mon. **46a** Leiden 1917 (1–191) 17 pls. [03 2 3 ; 07 1 ; 15 7 ; 27 A i ii iii iv ; 31 D.] **41**

Dornyay, B. Zur Altersfrage des "Chocsdolomites." Centralbl. Min. Geol. Paläont. Stuttgart **1917** 1917 (179–183). [27 B iii e ; 31 C F.] **42**

Douvillé, H. Les terrains secondaires dans le massif du Moghara à l'est de l'isthme de Suez, d'après les explorations de M. Couyat-Barthoux. Paris Mem. Acad. Sci. (2) **54** 1916 (1–184) pls. i–xxi. [Echinoderma pp. 67, 79.] [27 B iii c 1 ; 31 C F.] **43**

Duncan, F. M. Some methods of preserving marine biological specimens. London J. R. Microscop. Soc. **1917** 1917 (521–529). [03 6.] **44**

Embrey, G. The story of *Ophiolepis damesii.* Gloucester Proc. Cotteswold Nat. F. C. **29** 1916 (1917) (125–128). [03 1 ; 27 B iii d ; 31 E.] **45**

Faura y Sans, M. Síntesis estratigráfica de los terrenos primarios de Cataluña con una descripcion de los yacimientos fosiliferos más principales. Madrid Mem. R. Soc. espan. Hist. nat. **9** 1913 (1–202) pls. i–ix. [Lists of Echinoderma pp. 82, 112, 136.] [27 B iv f g k ; 31 F G.] **46**

Fisher, W. K. *Trophodiscus,* a new sea star from Kamchatka. Washington D.C. Smithsonian Inst. U.S. Nation. Mus. Proc. **52** 1917 (367–371) pls. xxviii–xxx. [07 5 8 ; 19 9 ; 27 A iv ; 31 D.] **47**

Fisher, W. K. The asteroid genus *Coronaster.* Washington D.C. Proc. Biol. Soc. **30** 1917 (23–26). [27 A ii iii ; 31 D.] **48**

Fisher, W. K. New starfishes from the Philippines and Celebes. Washington D.C. Proc. Biol. Soc. **30** 1917 (89–93). [27 A iii iv ; 31 D.] **49**

Fisher, W. K. Notes on *Asteroidea.* Ann. Mag. Nat. Hist. London (8) **20** 1917 (166–172). [03 7 ; 07 1 ; 31 D.] **50**

Fisher, W. K. A new genus and subgenus of East-Indian sea-stars. Ann. Mag. Nat. Hist. London (8) **20** 1917 (172–173). [27 A iii ; 31 D.] **51**

Fisher, W. K. New genera and species of *Brisingidae.* Ann. Mag. Nat. Hist. London (8) **20** 1917 (418–431). [27 A iii iv ; 31 D.] **52**

Foerste, A. F. *Comarocystites* and *Caryocrinites.* Cystids with pinnuliferous free arms. Ottawa Nat. Ottawa **30** 1916 (69–79 85–93) pls. ii–iv. [07 3 ; 27 B iv h ; 31 F G.] **53**

Foerste, A. F. Notes on Silurian fossils from Ohio and other central states. Ohio J. Sci. Columbus Ohio **17** 1917 (187–204 233–266) pls. viii–xii. [27 B iv g ; 31 F.] **54**

Fosse, R. Origine et distribution de l'urée dans la nature. Application de nouvelles méthodes d'analyse de l'urée basées sur l'emploi du xanthydrol. Quatrième partie. Demonstration de la présence de l'urée chez les invertébrés. Paris Ann. Inst. Pasteur **30** 1916 (673–676). [11 5 ; 31 D.] **55**

Fourtau, M. R. *vide* Hume, W. F.

Gigoux, E. E. Un escutelideo terciario de Caldera. Rev. Chilena Hist. Nat. Santiago **20** 1916 (80–82). [27 B ii ; 31 C.] **56**

Gladstone, R. J. *vide* Cameron, J.

Göthlin, G. F. Die doppelbrechenden Eigenschaften des Nervengewebes. Ihre Ursachen und ihre biologischen Konsequenzen. Stockholm Svensk. Vet. Akad. Handl. **51** (1) 1913 (1–92) 3 pls. [07 9 ; 31 B C D.] **57**

Goldfarb, A. J. Experimental studies upon stale germinal products. Washington D.C. Carnegie Inst. Year Book **13** 1914–1915 (1915) (205–206). [15 8; 31 C.] **58**

Goldfarb, A. J. Experimentally fused embryos with special reference to giant larvae formation, changes of symmetry, and changes of synchrony. New York N.Y. Soc. exper. Biol. Med. Proc. **12** 1914–1915 (1915) (108–109). [15 8; 31 C.] **59**

Goldfarb, A. J. The symmetry of grafted eggs in relation to giant larvae formation in *Arbacia punctulata.* Biol. Bull. Woods Hole Mass. **32** 1917 (21–33). [15 1 5 8; 31 C.] **60**

Goldfarb, A. J. Variability of germ cells of sea urchins. Washington D.C. Proc. Nation. Acad. Sci. **3** 1917 (241–245). [15 8; 27 A ii; 31 C.] **61**

Grieg, J. A. Echinodermer indsamlet av "Michael Sars" sommeren 1914. Arch. Math. og Naturvidenskab. Kristiania **34** 1916 No. 10 (1–11). [03 8; 27 A v; 31 B C D E.] **62**

Hague, Florence S. *vide* Woodward, A. E.

Hawkins, H. L. Morphological studies on the *Echinoidea Holectypoida* and their allies. I. Systematic discussion of the genera *Pygaster,* Agassiz, and *Plesiechinus,* Pomel. Geol. Mag. London (6) **4** 1917 (160–168). [03 7; 27 B iii b c; 31 C.] **63**

Hawkins, H. L. *ibid.* II. The sunken tubercles of *Discoides* and *Conulus.* t.c. (196–205) pl. xiii. [07 5; 27 B iii b c; 31 C.] **64**

Hawkins, H. L. *ibid.* III. Some variations in the structure of the apical system of *Holectypus.* t.c. (249–256) pl. xvi. [07 5; 27 B iii c 1; 31 C.] **65**

Hawkins, H. L. *ibid.* IV. The perignathic girdle of the *Pygasteridae.* t.c. (342–350). [07 5; 27 B iii c; 31 C.] **66**

Hawkins, H. L. *ibid.* V. The perignathic girdle of *Discoides cylindricus* (Lamarck). t.c. (389–398) pl. xxv. [07 5; 31 C.] **67**

Hawkins, H. L. *ibid.* VI. The buccal armature of *Conulus albogalerus,* Leske. t.c. (433–441) pl. xxviii. [07 5; 27 B iii b 1; 31 C.] **68**

Heath, H. The early development of a starfish, *Patiria* (*Asterina*) *mineata.* J. Morphology Philadelphia Pa. **29** 1917 (461–468) 1 pl. [15 5; 27 A iv; 31 D.] **69**

Herlant, M. Le mecanisme de la parthénogenése expérimentale chez les amphibiens et les echinodermes. Bull. sci. France Belg. Paris **50** 1917 (381–424). [11 7; 15 8; 31 C.] **70**

Herlant, M. Embryogénie. Sur les variations du volume du noyau de l'oeuf activé. Paris C. R. Acad. Sci. **164** 1917 (412–415). [15 8; 31 C.] **71**

Hilber, V. Das Geschlecht der Gattungsnamen auf *ites.* Centralbl. f. Min. Geol. u. Paläont. Stuttgart **67** (310). [03 7.] **72**

Hilton, W. A. An interesting basket star from Laguna Beach. Claremont Cal. Pomona Coll. J. Entom. Zool. **8** 1916 (17–18). [27 A ii; 31 E.] **73**

Hilton, W. A. Notes on coelenterates and echinoderms from Laguna Beach. Claremont Cal. Pomona Coll. J. Entom. Zool. **8** 1916 (88–93). [27 A ii; 31 D.] **74**

Hilton, W. A. Some remarks on the central nervous system of the starfish. Claremont Cal. Pomona Coll. J. Entom. Zool. **8** 1916 (123–127). [07 9; 31 D E.] **75**

Hilton, W. A. The central nervous system of serpent stars. Claremont Cal. Pomona Coll. J. Entom. Zool. **8** 1916 (171–175) 1 pl. [07 9; 27 A ii; 31 E. **76**

Hornell, J. The Indian beche-de-mer industry: Its history and recent revival. Madras Fish. Dept. Bull. Madras **11** 1917 (1–51). [19 15; 27 A iii; 31 B.] **77**

Hudson, G. H. Some fundamental types of hydrospires with notes on *Porocrinus smithi* Grant. Albany N.Y. Rept. N.Y. State Mus. **68** 1914 (1916) (163–169). [03 7; 11 3; 27 B iv h; 31 F.] **78**

Hudson, G. H. External structure of *Steganoblastus* as revealed through gum mountings and photo-micrographic stereograms. (Abstract.) New York N.Y. Bull. Geol. Soc. Amer. **28** 1917 (203). [07 1; 31 G.] **79**

Hudson, G. H. Some structural features of a fossil embryo crinoid.

(Abstract). New York N.Y. Bull. Geol. Soc. Amer. **28** 1917 (204). [07 1; 27 B ii; 31 F.] **80**

Hume, W. F. Report on the oil-fields region of Egypt. Egypt Surv. Dept. Cairo **1916** 1916 (i–viii 1–103) pls. i–xxiii. [Echinoderma by **Fourtau,** M. R. pp. 83–89]. [27 B ii b c d; 31 C.] **81**

Isberg, O. Bidrag till kännedomen on leptaenakalkens stratigrafi. Geol. Fören. Stockholm Forhandl. **39** 1917 (199–235). [Resumé in German pp. 232–235.] [27 B iv h.] **82**

Jackson, R. T. Fossil Echini of the Panama Canal zone and Costa Rica. Washington D.C. Smithsonian Inst. U. S. Nation. Mus. Proc. **53** 1917 (489–501) pls. lxii–lxviii. [27 B ii d e; 31 c.] **83**

Jaekel, O. Über fraglich Tunicaten aus dem Perm Siciliens. Palaeont. Zeitschr. Berlin **2** 1915 (66–74) pl. i. [19 11; 27 A ii B iii e.] **84**

Jaworski, E. Beiträge zur Geologie und Paläontologie von Südamerika xxiii. Beiträge zur Kenntniss des Jura in Süd-Amerika. Teil II Spezieller, paläontologischer Teil. Neu. Jahrb. Min. Geol. Paläont. Stuttgart Beil. Bd. **40** 1915 (364–456) pls. v–viii. [Echinoderma pp. 431–432]. [27 B iii c 2; 31 C.] **85**

Jewell, Minna E. *vide* Lewis, H. B.

Kew, W. S. W. Recent additions to our knowledge of California Cenozoic echinoids. (Abstract.) New York N.Y. Bull. Geol. Soc. Amer. **28** 1917 (226). [27 B iii.] **86**

Kew, W. S. W. *vide* Dickerson, R. E.

Kilian, W. and **Reboul,** P. Mémoires pour servir à l'explication de la carte géologique détaillée de la France. Contribution à l'étude des faunes paléocrétacées du sud-est de la France. I. La faune de l'Aptien inférieur des environs de Montélimar (Drome) (Carrière de l'homme d'armes). II. Sur quelques ammonites de l'Hauterivien de la Bégude (Basses-Alpes). Imprim. National Paris **1915** 1915 (i–iv 1–221 225–296) pls. i–xv. [Echinoderma pp. 89, 120, 145–148.] [27 B iii b 2; 31 C.] **87**

Kindle, E. M. Notes on the bottom environment of the marine invertebrates of Western Nova-Scotia. Ottawa Nat. Ottawa **30** 1917 (149–154). [Echinoderma pp. 152–153]. [03 8; 27 ii; 31 C D.] **88**

Koehler, R. Echinodermes (astéries, ophiures et échinides) recueillis par M. Rallier du Baty, aux iles de Kerguelen, en 1913–1914. Ann. Inst. Oceanogr. Paris **7** (8) 1917 (1–88) pls. i–x. [27 A iii; 31 C D E.] **89**

Lambert, J. Description des échinides crétacés de la Belgique, principalement de ceux conservés au Musée royal de Bruxelles. II. Échinides de l'étage sénonien. Bruxelles Mem. Mus. roy. Hist. nat. Belg. **4** (4) 1910 (1911) (1–81) pls. i–iii. [27 B iii b 1; 31 C.] **90**

Lambert, J. Échinides néogènes des Antilles anglaises. Troyes Mem. Soc. Acad. Aube **79** 1915 (17–33) pl. iii. [27 B ii; 31 C.] **91**

Lambert, J. Sur l'existence de l'étage valengien et sur l'oscillation barrémienne dans l'Aube et dans l'Yonne avec observations sur les échinides de ces étages. Troyes Mem. Soc. Acad. Aube **80** 1916 (19–94). [27 B iii b 2; 31 C.] **92**

Lambert, J. Le barrémien supérieur à faciès urgonien de Brouzet-les-Alais (Gard). Pt. ii. Complèment de l'étude paléontologique des gisements de Brouzet. Échinides. Paris Mem. Soc. Geol. Fr. Paléontol. **21** fasc. 4 1916 No. 51 (48). [27 B iii b 2; 31 C.] **93**

Lambert, J. Note sur quelques *Holasteridae.* Yonne Auxerre Bull. Soc. Sci. Hist. nat. **70** 1916 (1917) (191–223). [27 B iii 1 2; 31 C.] **94**

Lambert, J. and **Thiéry,** P. Essai de nomenclature raisonnée des Échinides. L. Ferrière, Place de l'Hôtel-de-Ville, Chaumont. Fasc. 4 **1914** 1914 (241–320) pls. vii–viii. [03 7; 27 A i B i; 31 C]. **95**

Lebour, Marie V. The *Mieroplankton* of Plymouth Sound from the region beyond the breakwater. Plymouth J. Mar. Biol. Ass. (N.S.) **11** 1917 (133–182). [Echinoderma p. 170]. [03 8; 27 A ii; 31 B C E.] **96**

Lewis, H. B. and **Jewell,** M. E. The occurrence of lichenase in the digestive tract of invertebrates. New York N.Y. Soc. exper. Biol. Med. Proc. **14** 1916 (59–60). [11 4 7; 31 D.] **97**

Lillie, R. S. The physiology of cell-division. VI. Rhythmical changes in the resistance of the dividing sea-urchin egg to hypotonic sea water and their physiological significance. J. exper. Zool. Philadelphia Pa. **21** 1916 (369–402). [15 8; 31 C.] **98**

Lillie, R. S. The conditions determining the rate of entrance of water into fertilized and unfertilized *Arbacia* eggs, and the general relation of changes of permeability to activation. Amer. J. Physiol. Baltimore **43** 1917 (43–57). [15 8; 31 C.] **99**

Lillie, R. S. Temperature coefficients in the activation of starfish eggs by butyric acid. Biol. Bull. Woods Hole Mass. **32** 1917 (131–158). [15 8; 31 D.] **100**

Loeb, J. Cluster formations of spermatozoa caused by specific substances from eggs. J. exper. Zool. Philadelphia Pa. **17** 1914 (123–140). [15 8; 31 C.] **101**

Lovisato, D. Dodicesimo contributo echinodermico con 12 specie nuove di *Clypeaster* del Miocene medio ed inferiore di Sardegna. Roma Boll. Soc. Geol. Ital. **34** 1915 (1916) (469–504) pls. xviii–xix. [27 B ii d; 31 C.] **102**

Macnair, P. Notes on the microscopical characters of the Blackbyre Limestone in the West of Scotland. Glasgow Trans. Geol. Soc. **16** 1916–1917 (1917) (290–304) pl. xii. [27 B iv e; 31 C.] **103**

Macnair, P. The Hurlet sequence in the East of Scotland and the Abden fauna as an index to the position of the Hurlet limestone. Edinburgh Proc. R. Soc. **37** 1917 (173–208) 1 pl. [27 B iv e; 31 C F.] **104**

Maluquer, J. Organización i increment de la seccio oceanografica. Barcelona Junta Ci. Nat. **2** 1917 (205–238) [Echinoderma pp. 229–231]. [03 5; 27 A ii.] **105**

Mather, K. F. Pottsville formations and faunas of Arkansas and Oklahoma. Amer. J. Sci. Newhaven Conn. (4) **43** 1917 (133–139). [03 8; 27 B iv.] **106**

Matsumoto, H. A monograph of Japanese *Ophiuroidea*, arranged according to a new classification. Tokyo J. Coll. Sci. Univ. **38** (2) 1917 (1–408) pls. i–vii. [03 2; 07 1 3; 15 7; 27 A iv; 31 E.] **107**

Mayer, A. G. Efficacy of holothurians in dissolving limestone. Washington D.C. Carnegie Inst. Year Book **15** 1916–1917 (1917) (186–187). [11 4; 19 4; 31 B.] **108**

Medes, Grace. A study of the causes and the extent of variations in the larvae of *Arbacia punctulata*. J. Morphology Philadelphia Pa. **30** 1917 (317–432). [15 5; 31 C.] **109**

Moore, C. R. On the capacity for fertilisation after the initiation of development. I. An attempt to fertilize sea-urchin eggs subsequent to hypertonic parthenogenesis. Biol. Bull. Woods Hole Mass. **33** 1917 (258–295). [15 8; 31 C.] **110**

Mortensen, T. On the development of some West Indian echinoderms. Washington D.C. Carnegie Inst. Year Book **15** 1916–1917 1917 (193–194). [15 5; 19 2; 27 A ii; 31 C D E.] **111**

Mortensen, T. *Notocrinus virilis* n.g., n. sp., a new viviparous crinoid from the Antarctic Sea. Preliminary notice. Kjobenhavn Vid. Medd. Dansk naturh. Foren. Odense **68** 1917 (205–208). [27 A vi; 31 F.] **112**

Mortensen, T. Papers from Dr. Th. Mortensen's Pacific Expedition 1914–16. I. Observations on protective adaptations and habits, mainly in marine animals. Kjobenhavn Vid. Medd. Dansk naturh. Foren. Odense **69** 1917 (57–96) pl. i. [19 5; 27 A iv; 31 B C.] **113**

Navarro, F. L. Sur la non-existence du Crétacé dans l'ile de Hierro. (Canaries). Paris C. R. Acad. Sci. **165** 1917 (796–797). [27 B iii b; 31 C.] **114**

Nordgaard, O. Havstrømmene og den Norske marine Fauna. (Meddels. Trondhjems biol. Stat. No. 9) Christiania Kgl. norske Vid. Selsk. Skrift. No. **5** 1914 (1915) (1–34). [03 8; 27 A ii; 31 C D F.] **115**

Nusbaum-Hilarowicz, J. and Oxner, M. Contributions à l'étude de la régénération chez les échinides (Note préliminaire). Bull. Inst. Océanogr. Monaco **325** 1917 (1–8). [19 7; 31 C.] **116**

Ostenfeld, C. H. Catalogue des espèces de plantes et d'animaux observées dans le Plankton recueilli pendant les expéditions depuis le mois de juillet 1908 jusqu'au mois de decembre 1911. Copenhague Publ. circ.

70 1916 (1–87) [Echinoderma pp. 79–81]. [03 8; 27 A ii; 31 B C D.] **117**

Oxner, M. *vide* Nusbaum-Hilarowicz, J.

Packard, C. The effect of radium radiations on the rate of cell division. J. exper. Zool. Philadelphia Pa. **21** 1916 (199–212). [15 8; 31 C.] **118**

Painter, T. S. Some phases of cell mechanics. Anat. Record Philadelphia Pa. **10** 1916 (232–233). [15 8; 31 C.] **119**

Painter, T. S. Contributions to the study of cell mechanics. I. Spiral asters. J. Exper. Zool. Philadelphia Pa. **20** 1916 (509–526) 2 pls. (15 8; 31 C.] **120**

Plate, L. Fauna ceylanica, Untersuchungen zur Fauna Ceylons nach den Sammlungen von L. Plate. II. Uebersicht ueber biologische Studien auf Ceylon. Jenaische Zeitschr. Naturw. Jena **54** 1916 (1–42) pls. i–ix. [19 1 8; 27 A iii; 31 B C D.] **121**

Ravn, J. P. J. Kridtaflejringerne paa Bornolms Sydvestkyst og deres Fauna. I. Cenomanet. Copenhague Commun. Paleontol. Mus. Min. Geol. Univ. **12** 1916 (1–39) pls. i–v. [Resumé in French pp. 38–39. Echinoderma pp. 15–16]. [03 8; 27 B iii b 1; 31 C.] **122**

Raymond, P. E. Notes sur les Cyclocystoïdes. Canada Minist. Mines Comm. geol. Mus. commem. Victoria B.C. Bull. **1** 1913 (1915) (29–39). [07 B i iv h; 31 G.] **123**

Reboul, P. *vide* Kilian, W.

Schultz, E. Nouvelles expériences sur la survivance des parties détachées d'un organisme. Rev. Zool. Russe Moscou **1** 1916 (79–87). [07 3; 19 7; 31 C D.] **124**

Schultz, E. Nouvelles expériences sur la survie fragments tissulaires. (Réun. biol. Petrograd). Paris C. R. Soc. Biol. **79** 1916 (207). [19 7; 03 C.] **125**

Seale, A. Sea products of Mindanao and Sulu, III: Sponges, tortoise shell, corals and trepang. Philippine J. Sci. Manilla **12** 1917 Sect. D (191–212) 4 pls. [19 2 15; 27 A iv; 31 B.] **126**

Spencer, W. K. A monograph of the British Palaeozoic *Asterozoa* (cont.) Palaeontogr. Soc. London **1915** (1916) (57–108) pls. ii–v. [03 2; 07 1; 23 1; 27 B iv g h; 31 D.] **127**

Stafford, J. On the fauna of the Atlantic coast of Canada. Second report.—Malpeque, 1903–4. Contrib. Canad. Biol. Ottawa (1906–1910) **1912** 1912 (37–44). [03 8; 27 A ii.] **128**

Stafford, J. On the fauna of the Atlantic coast of Canada. Third report.—Gaspe, 1905–1906. Contrib. Canad. Biol. Ottawa (1906–1910) **1912** 1912 (45–67). [03 8; 27 A ii.] **129**

Stefanini, G. Sull'esistenza dell' Oligocene in Friuli e sulle mutazioni del *Potamides margaritaceus*, Br. Padova Atti Acc. Sci. Ven.-Trent.-Ist. (3) **8** 1915 (1916) (68–94). [Echinoderma p. 73.] [27 B ii e; 31 C.] **130**

Stefanini, G. Specie nuove del Miocene Veneto. Padova Atti Acc. Sci. Ven.-Trent.-Ist. (3) **8** 1915 (1916) (151–162). [27 B ii d; 31 C.] **131**

Stiles, C. W. Notice of possible suspension of the rules of nomenclature in the cases of *Holothuria* 1758 vs. *Physalia* 1801, and *Bohadschia* 1833 vs. *Holothuria* 1791. Science New York N.Y. **45** 1917 (113). [03 7; 31 B.] **132**

Stiles, C. W. Decima serie di nomi generici (Echinodermi) in esame per la compilazione dell'elenco ufficiale dei nomi generici. Monit. Zool. Ital. Firenze **28** 1917 (25–31). [03 7.] **133**

Thiéry, P. *vide* Lambert, J.

Tilmann, N. Die Fauna des unteren und mittleren Lias in Nord-und Mittel-Peru. Neu. Jahrb. Min. Geol. Paläont Stuttgart Beil. Bd. **41** 1917 (628–712) pls. xxi–xxvi. [07 5; 27 B iii d; 31 C F.] **134**

Townsend, C. H. Voyage of the "Albatross" to the Gulf of California in 1911. New York N.Y. Bull. Amer. Mus. Nat. Hist. **35** 1916 (399–476). [03 8; 27 A iv.] **135**

Upton, C. Notes on *Chirodota*-spicules from the lias and inferior oolite. Gloucester Proc. Cotteswold Nat. F. C. **29** 1916 (1917) (115–117). [07 5; 27 B iii c d; 31 B.] **136**

Valette, Dom A. Note sur les crinoïdes de la craie blanche. Yonne Auxerre Bull. Soc. Sci. Hist. nat. **70** 1916 (1917) (79–178). [07 1; 27 B iii b 1; 31 F.] **137**

Verrill, A. E. Report on the starfishes of the West Indies, Florida and Brazil, including those obtained by the Bahamas expedition from the University of Iowa in 1893. Iowa City Univ. Bull. **7** (1) 1915 (1–232) pls. i–xxix. [15 7; 23 5; 27 A ii; 31 D.] **138**

Vinassa de Regny, P. *vide* Buscalioni, L.

Walcott, C. D. Cambrian geology and paleontology. IV. Fauna of the Mount Whyte formation. Washington D.C. Smithsonian Inst. Misc. Coll. **67** 1917 (61–114) pls. viii–xiii. [27 B iv k; 31 G.] **139**

Waring, C. A. Statigraphic and faunal relations of the Martinez to the Chico and Tejon of Southern California. San Francisco Proc. Calif. Acad. Sci. (4) **7** 1917 (41–124) pls. vii–xvi. [Echinoderma p. 58]. [27 B iii b 1; 31 C E.] **140**

Woodward, A. E. and **Hague,** Florence S. Iodine as a parthenogenetic agent. Biol. Bull. Woods Hole Mass. **33** 1917 (355–360). [15 8; 31 C.] **141**

Zirpolo, G. Di una rara anomalia delle braccia di *Astropecten aurantiacus*, L. Napoli Publ. Staz. zool. Milano **1** 1916 (31–58) pls. i–iii. [23 1; 31 D.] **142**

II.—SUBJECT INDEX.

N.B.—*The number in Clarendon type quoted after the author's name, in the Subject and Systematic Indices, refers to "Titles," where a fuller reference will be found.*

GENERAL. 1003

1. Historical.

[Anon.] **1**; **Embrey, 45.**

2. General Treatises and Monographs.

Döderlein, 41; Matsumoto, 107; Spencer, 127.

3. Bibliography.

Döderlein, 41.

5. Museums.

Bell, 9; Maluquer, 105.

6. Technique.

Buscalioni & Vinassa de Regny, 14; Duncan, 44.

7. Nomenclature.

Fisher, 50; Hawkins, 63; Hilber, 72; Hudson, 78; Lambert & Thiéry, 95; Stiles, 132, 133.

8. Local Lists.

Dickerson & Kew, 40; Grieg, 62; Kindle, 88; Lebour, 96; Mather, 106; Nordgaard, 115; Ostenfeld, 117; Ravn, 122; Stafford, 128, 129; Townsend, 135.

STRUCTURE. 1007

1. General accounts.

Döderlein, 41; Fisher, 50; Hawkins, 66 to 68; Hudson, 79, 80; Matsumoto, 107; Spencer, 127; Valette, 137.

3. Homologies of Classes.

Foerste, 53; Matsumoto, 107 Schultz, 124.

5. Skeletal Anatomy.

Bather, 6; Hawkins, 64 to 68; Tilmann, 134; Upton, 136.

8. Digestive System.

Crozier, 35.

9. Nervous System.

Boas, 11; Göthlin, 57; Hilton, 75, 76.

PHYSIOLOGY. 1011

3. Respiration.

Hudson, 78.

4. Alimentation.

Crozier, 35; Lewis & Jewell, 97; Mayer, 108.

5. Excretion.

Crozier, 34; Fosse, 55.

6. Sensation.

Clark, 29; Crozier, 33, 35, 37.

7. Experimental.

Child, 19; Crozier, 35; Herlant, 70; Lewis & Jewell, 97.

DEVELOPMENT. 1015

1. General Principles.

Cameron & Gladstone, 15; Goldfarb, 60.

4. Oviposition, Fertilisation and Segmentation.

Child, 19; Crozier, 36; Herlant, 70.

5. Larval stages.

Child, 19, 20; Goldfarb, 60; Heath, 69; Medes, 109; Mortensen, 111.

7. Post-larval growth-stages.

Döderlein, 41; Matsumoto, 107; Verrill, 138.

8. Experimental Embryology.

Chambers, 16; Child, 20; Conklin, 32; Goldfarb, 58 to 61; Herlant, 70, 71; Lillie, 98 to 100; Loeb, 101; Moore, 110; Packard, 118; Painter, 119, 120; Woodward & Hague, 141.

ETHOLOGY. 1019

2. Special habits.

Mortensen, 111; Seale, 126.

3. Habitat.

Clark, 29.

4. Feeding.

Clark, 29; Mayer, 103.

5. Defence and Protection.

Mortensen, 113.

6. Locomotion.

Clark, 29; Crozier, 33.

7. Autotomy and Regeneration.

Nusbaum-Hilarowicz & Oxner, 116; Schultz, 124, 125.

8. Parasites and Commensals.

Plate, 121.

15. Echinoderms as Food.

Hornell, 77; Seale, 126.

VARIATION AND ÆTIOLOGY. 1023

1. Variation in form.

Clark, 29; Medes, 109; Spencer, 127; Zirpolo, 142.

2. Variation in colour.

Clark, 29.

5. Variation, teratological.

Verrill, 138.

8. Evolution.

Boas, 11.

9. Relations to other Phyla.

Boas, 11.

10. Phylogeny.

Matsumoto, 107.

DISTRIBUTION. 1027

A. Geographical.

i. General.

Döderlein, 41; Lambert & Thiéry, 95.

ii. Atlantic Ocean, etc.

Bell, 10; Clark, 22, 24, 25; Crozier, 33, 35, 38; Döderlein, 41; Fisher, 48; Goldfarb, 61; Hilton, 73, 74, 76; Jaekel, 84; Kindle, 88; Lebour, 96; Maluquer, 105; Mortensen, 111; Nordgaard, 115; Ostenfeld, 117; Stafford, 128, 129; Verrill, 138.

iii. Indian Ocean, etc.

Döderlein, 41; Fisher, 48, 49, 51, 52; Hornell, 77; Koehler, 89; Plate, 121.

iv. Pacific Ocean, etc.

Bell, 10; Clark, 21, 23, 26, 27, 28, 30; Döderlein, 41; Fisher, 47, 49, 52; Heath, 69; Matsumoto, 107; Mortensen, 113; Townsend, 135.

v. Arctic Ocean, etc.

Grieg, 62.

vi. Antarctic Ocean, etc.

Bell, 10; Mortensen, 112.

B. Geological.

1. General.

Brown, 12; Lambert & Thiéry, 95.

ii. Cainozoic.

a. General.

Gigoux, 56; Hudson, 80; Kew, 86; Lambert, 91.

b. Pleistocene.

Fourtau, 81.

c. Pliocene.

Bell, 8, 9; Fourtau, 81.

d. Miocene.

Dickerson & Kew, 39, 40; Fourtau, 81; Jackson, 83; Lovisato, 102; Stefanini, 131.

e. Oligocene.

Dickerson & Kew, 39; Jackson, 83; Stefanini, 130.

f. Eocene.

Bather, 7; Dickerson & Kew, 40.

iii. Mesozoic.

a. General.

Charpiat, 17.

b. Cretaceous.

Navarro, 114; Hawkins, 63, 64, 68.

1. Upper Cretaceous.

Brydone, 13; Checchia-Rispoli, 18; Lambert, 90, 94; Ravn, 122; Valette, 137; Waring, 140.

2. Lower Cretaceous.

Kilian & Reboul, 87; Lambert, 92, 93, 94.

c. Jurassic.

Hawkins, 63, 64, 66.

1. Upper Jurassic.

Douvillé, 43; Hawkins, 65; Upton, 136.

2. Lower Jurassic.

Jaworski, 85.

d. Lias (and Rhaetic).

Embrey, 45; Tilmann, 134; Upton, 136.

e. Trias.

Dornyay, 42; Jaekel, 84.

iv. Palaeozoic.

d. Upper Carboniferous.

Bather, 5; Clark, 31; Mather, 106.

e. Lower Carboniferous.

Macnair, 103, 104.

f. Devonian.

Faura y Sans, 46.

g. Silurian.

Faura y Sans, 46; Foerste, 54; Spencer, 127.

h. Ordovician.

Bather, 3, 4, 5; Foerste, 53; Hudson, 78; Isberg, 82; Raymond, 123; Spencer, 127.

k. Cambrian.

Faura y Sans, 46; Walcott, 139.

III. SYSTEMATIC INDEX. 1031

A. General.

[Vacant.]

B. Holothurioidea.

Actinopyga agassizi at Bermuda, Crozier **38**.

†*Chirodota* Upton **136**.

Cucumaria punctata, Crozier **35**; *C. frondosa*, Grieg **62**.

Holothuria larval anatomy, Boas **11**; sensation, Crozier **33, 37**; alimentation, Crozier **34, 35**; reproduction, Crozier **36**; food properties, Hornell **77**; *H. atra* figd. Plate **121**.

Holothuriidae as food, Seale **126**.

Molpadia oolitica, Grieg **62**.

Pseudostichopus trachus occultatus protection, Mortensen **113**.

Stichopus moebii, Crozier **35**; *S. tremula* nervous system, Göthlin **57**; *S. chloronotus* as food, Hornell **77**.

Synapta beselii, Plate **121**.

Synaptula hydriforme protection Mortensen **113**.

C. Echinoidea.

Abatus cordatus, Koehler **89**; *A.*, Clark **30**.

Aceste, Clark **30**.

Acropeltinae trib. n., Lambert and Thiéry Ess. nom. Échin. **1914** p. 267.

†*Acrosaster michaleti* Lambert sp. n. Bathonian Var, Lambert and Thiéry t.c. p. 261.

Aeropsidae fam. n. for *Aeropsis* and *Aceste*, Clark Mem. Mus. Comp. Zool. Harvard **46** p. 133.

Aeropsis, Clark t.c. p. 134.

†*Agassizia clevei* Cotteau figd., Dickerson and Kew **39**.

Alexandraspis nom. mut. (= *Alexandria* Pfr. 1881 non Molin 1860) type *A. magnifica* Pfr., Lambert and Thiéry Ess. nom. Échin. **1914** p. 315.

Alexandria vide *Alexandraspis*.

Amblypneustes grandis, pachistus Clark **27**.

Amphipneustes, Clark **30**.

†*Anomalanthus gregoryi*, Lambert **91**.

†*Anorthoscutum* gen. n. type *Scutella interlineatum*, Stimps., Lambert and Thiéry Ess. nom. Échin. **1914** p. 319.

Aphanopora, CLARK **30**.

Araeosoma thetidis, CLARK **27**.

Arbacia punctulata larvae, MEDES **109**; embryology, MOORE **110**; *A.* embryology, CHAMBERS **16**; CHILD **20**; GOLDFARB **59–61**; LILLIE **98**, **99**; PACKARD **118**; PAINTER **119**, **120**; WOODWARD and HAGUE **141**.

†*Archaeocidaris urei*, MACNAIR **103**.

Archaeopneustes, CLARK **30**.

Argopatagus, CLARK **30**.

Astropyga radiata, CLARK **27**.

† *Atactus* vide † *Rotulechinus*.

†*Aulacocidaris salviensis*, LAMBERT **92**.

†*Balanocidaris schluteri* **sp. n.** Campanian Belgium, LAMBERT Mem. Mus. r. Hist. nat. Belg. **4** (4) p. 48.

Breynia, CLARK **30**.

Brisaster with *B. kerguelensis* p. 184 **sp. n.** Kerguelen I, CLARK Mem. Mus. Comp. Zool. Harvard **46** pp. 178–185.—*B. fragilis*, GRIEG **62**.

Brissopsis, CLARK **30**.

†*Brissopsis dainellii* **sp. n.** Miocene Venetia, STEFANINI Atti Acc. Sci. Padova **8** p. 161.—*B. atlantica*, LAMBERT **91**.

Brissus, CLARK **30**.

†*Brissus carinatus* figd., FOURTAU **81**.

†*Cardiaster*, LAMBERT **90**, **94**.

†*Cardiataxis* **subgen. n.** of *Cardiaster* type *C. peroni*, LAMBERT Bull. Soc. Sci. Yonne **70** p. 215 [but as *Cardiotaxis* **gen. n.** t.c.p. 223].

†*Cassidulus mortenseni* **sp. n.** Senonian Belgium, LAMBERT Mem. Mus. r. Hist. nat. Belg. **4** (4) p. 60.

†*Catopygus*, LAMBERT **90**.

Chaetodiadema granulatum, CLARK **27**.

Cidaris conferta **sp. n.** Australia, CLARK Biol. Results of F.I.S. Endeavour. **4** p. 100.

†*Cidaris* with *C. bernouilensis* p. 45 **sp. n.** Valengian France, LAMBERT Mem. Soc. Acad. Aube **80** pp. 45-47, 70. —*C. schlagintweiti* **sp. n.** Mid-Lias Peru, TILMANN Neu. Jahrb. Min. Stuttgart Beil. Bd. **41** p. 694.—*C. dorsata* DORNYAY **42**.—*C. schloenbachi* figd. DOUVILLÉ **43**.—*C. ciplyensis*, LAMBERT **90**. —*C.*, RAVN **122**.

Clypeaster CLARK **27**.

†*Clypeaster gatuni* **sp. n.** Upper Oligocene or Miocene Panama, JACKSON Proc. U.S. Nation. Mus. **53** p. 491.—*C. lanceolatus* figd. *ibid.*—*C. batheri* **sp. n.** Miocene Antigua, LAMBERT & THIÉRY Ess. nom. Échin. **1914** p. 298; LAMBERT Mem. Soc. Acad. Aube **79** p. 12.—*C.* with *C. santarosai* p. 488, *settembrinii* p. 489, *verdii* p. 490, *modenai* p. 491, *ruffinii* p. 492, *guilleti* p. 493, *vochierii* p. 495, *tolai* p. 496, *thappazi* p. 497, *gavotti* p. 498, *tamburellii* p. 499, *ferrarii* p. 500 **spp. n.** Miocene Sardinia, LOVISATO Boll. Soc. Geol. Ital. **34** pp. 469-501.—*C. marinellii* **sp. n.** Langhian Venetia, STEFANINI Atti Acc. Sci. Padova **8** p. 158.—*C.* cf. *marginata*, BELL **9**.—*C. cubensis*, *C.* cf. *concavus* Cotteau figd., DICKERSON & KEW **39**.—*C. placunarius*, *scutiformis*, FOURTAU **81**.

†*Clypeopygus subquadratus*, LAMBERT **92**.

†*Codiopsis bruni* Lambert **sp. n.** Aturian Haut Garonne, LAMBERT & THIÉRY Ess. nom. Échin. **1914** p. 264.—*C. lorini*, LAMBERT **92**.

Coelopleurus australis **sp. n.** Australia CLARK Biol. Results of F.I.S. Endeavour **4** p. 107.

Conolampas, CLARK **30**.

†*Conulus* structure, HAWKINS **64**, **65**, **68**.

†*Cretacechinus* **gen. n.** type *Stomatech. camarensis* LOR., LAMBERT & THIÉRY Ess. nom. Échin. **1914** p. 253.

†*Cyamidia* **gen. n.** type *Echinocyamus nummulitica* D. & S., LAMBERT & THIÉRY t.c. p. 288.

†*Cyphosoma tertiarium*, BELL **8**.

Delopatagus, CLARK **30**.

Dendraster excentricus figd., HILTON **74**.

Desmoulinaster **nom. mut.** (= *Moulinia* Ag. 1841 and *Moulinsia* Ag. 1847 non. Grat. 1841) LAMBERT & THIÉRY Ess. nom. Échin. **1914** p. 296.

Diadema setosum, PLATE **121**.—*D.* larva, MORTENSEN **111**.

†*Diadema megastoma*, BELL, **9**.

†*Dicoptella bigoti* figd., LAMBERT & THIÉRY **95**.

†*Diplopodia*, LAMBERT **92**.

†*Discoides cylindricus* structure, HAWKINS **64**, **65**, **67**.—*D. peroni*, LAMBERT

92.—*D. pulvinata* var. *major* introduced in Hierro I., NAVARRO 114.

Dorocidaris papillata, NORDGAARD 115.

†*Dorocidaris faugasi*, *venulosoides*, LAMBERT 90.

Echinarachnius embryology, CHAMBERS 16.

Echinocardium, CLARK 30.

†*Echinoconus* with *E. hannoniensis* p. 32 Campanian Belgium, *wollemanni* p. 62, *globulus* varr. *stadensis* p. 75, *goldfussi*, *turgidula* p. 76 Senonian Europe spp. and varr. n. LAMBERT Mem. Mus. r. Hist. nat. Belg. 4 (4) pp. 21, 29, 46, 54, 60, 73.

†*Echinocorys*, LAMBERT 90, 94.

Echinocyamus platytatus, CLARK 27.

†*Echinodiscus dubaleni* Lambert sp. n. Bartonian Landes, LAMBERT & THIÉRY Ess. nom. Échin. 1914 p. 311.

†*Echinogalerus belgicus* Campanian, *pusillus* Senonian Belgium spp. n., LAMBERT Mem. Mus. r. Hist. nat. Belg. 4 (4) pp. 45 and 64, 65.

Echinolampas, CLARK 30.

†*Echinolampas* aff. *angulatus* Mer. and *E.* "sp. n." Egypt, FOURTAU Rept. oilfields reg. Egypt 1916 pp. 87, 88.—*E. semiorbis*, JACKSON 83.—*E. semiorbis*, *lycopersicus*, *anguillae*, LAMBERT 91.

Echinometra lucunter larva, MORTENSEN 111.

Echinoneus, CLARK 30.

†*Echinopygus montmollini*, LAMBERT 92.

Echinus cantaber sp. n. St. Sebastien, LAMBERT & THIÉRY Ess. nom. Échin. 1914 p. 242.—*E. acutus*, *esculentus* regeneration, NUSBAUM-HILAROWICZ & OXNER 116.—*E. e.* nervous system, GÖTHLIN 57.—*E. horridus*, CLARK 27.—*E. microtuberculatus* embryology, CONKLIN 32.—*E.* CAMERON & GLADSTONE 15, SCHULTZ 125.

+*Echinus esculentus*, BELL 9.

Ellipsechininae trib. n., LAMBERT & THIÉRY Ess. nom. Échin. 1914 p. 256.

†*Encope annectans* p. 491, *platytata* p. 494, *megatrema* p. 496 spp. n. Tertiary Panama, JACKSON Proc. U.S. Nation. Mus. 53 pp. 491–498.

†*Eoscutum* Lambert subg. n. of *Porpitella* type *P. doncieuxi*, Lamb. with *E. dubaleni* Lambert sp. n. Bartonian Landes, LAMBERT & THIÉRY Ess. nom. Échin. 1914 p. 293.

Eucidaris metularia protection, MORTENSEN 113.

Eucosmechinae trib. n., LAMBERT & THIÉRY Ess. nom. Échin. 1914 p. 269.

†*Eucosmechinus* nom. mut. (= *Eucosmus* Ag. 1846 non Hübn. 1816) LAMBERT & THIÉRY t.c. p. 270.

†*Eucosmus* vide †*Eucosmechinus*.

Eurocidaris nutrix, KOEHLER 89.

†*Eurypleura* vide †*Tholeopelta*.

†*Fibulaster* subg. n. type *Sismondia gracilis* Cott., LAMBERT & THIÉRY Ess. nom. Échin. 1914 p. 296.

†*Gajechinus* gen. n. type *E. subcrenatus* D. & S., LAMBERT & THIÉRY t.c. p. 242.

†*Galeola*, LAMBERT 90, 94.

†*Gautheria broecki*, LAMBERT 90.

†*Globatur tauroentanus* and *tumidus* figd., LAMBERT & THIÉRY 95.

Glypticinae trib. n. of *Arbacidae*, LAMBERT & THIÉRY Ess. nom. Échin. 1914 p. 261.

Gonimaretia gen. n. of *Spatangidae* with *G. tylota* (type) p. 241, near Kei Is. and *G. laevis* p. 244 California spp. n., CLARK Mem. Mus. Comp. Zool. Harvard 46 pp. 240–246.

Goniocidaris, CLARK 27.

†*Goniopygus peltatus*, *decoratus*, LAMBERT 92.—*G. gauthieri* figd., LAMBERT & THIÉRY 95.

Gymnechinus pulchellus protection, MORTENSEN 113.—*G. epistichus*, CLARK 27.

Gymnopatagus with *G. micropetalus* p. 227 sp. n. Japan, CLARK Mem. Mus. Comp. Zool. Harvard 46 pp. 226–233.

Habrocidaridae fam. n., LAMBERT & THIÉRY Ess. nom. Échin. 1914 p. 259.

Heliocidaris erythrogramma, CLARK 27.

Hemiaster, CLARK 30.

†*Hemiaster* with *H. rutoti* p. 52 sp. n. Senonian Belgium, LAMBERT Mem. Mus. r. Hist. nat. Belg. 4 (4) pp. 52–54.—*H. oriens* sp. n. Aptian France,

LAMBERT Mem. Soc. Acad. Aube **80** p. 88.—*H.*, RAVN **122.**

Hemiasteridae **fam. n.**, CLARK Mem. Mus. Comp. Zool. Harvard **46** p. 159.

†*Hemidiadema rugosum*, LAMBERT **92.**

Hemipneustinae, LAMBERT **94.**

†*Heteraster oblongus*, LAMBERT **92.**

†*Heteropneustes rutoti* **sp. n.** Campanian Belgium, LAMBERT Mem. Mus. r. Hist. nat. Belg. **4** (4) p. 38.

Hipponoë embryology, GOLDFARB **61.**

Histocidaris elegans, CLARK **27.**

†*Holaster* with *H. valanginensis* p. 200 **sp. n.** Cretaceous Switzerland, LAMBERT Bull. Soc. Sci. Yonne **70** pp. 199–210.—*H. planus* zone of, BRYDONE **13.**—*H.*, LAMBERT **92, 93.**

†*Holasteridae*, LAMBERT **94.**

†*Holectypus excisus* figd., LAMBERT & THIÉRY **95.**—*H.*, structure, HAWKINS **64, 65.**

Holopneustes inflatus, porosissimus, CLARK **27.**

Holopneustinae **trib. n.**, LAMBERT & THIÉRY Ess. nom. Échin. **1914** p. 251.

Homolampas, CLARK **30.**

†*Hyposalenia* with *H. bonnevillei* p. 80 **sp. n.** Lr. Cretaceous France, LAMBERT Mém. Soc. Acad. Aube **80** pp. 53, 79.

Hypselaster **gen. n.** type *Schiz. limicola* Ag. with *H. brachypetalus* p. 191 **sp. n.** Grenada, CLARK Mem. Mus. Comp. Zool. Harvard **46** pp. 185–192.

Hypselolampas **gen. n.** type *Calopygus recens* Ag., CLARK t.c. p. 109.

†*Infulaster*, LAMBERT **94.**

†*Jacksonaster chilensis* **sp. n.** Pliocene Chili, LAMBERT & THIÉRY Ess. nom. Échin. **1914** p. 313.

†*Laganum depressum* figd., FOURTAU **81.**

†*Leiocidaris baculosa, sismondai*, FOURTAU **81.**

Linopneustes, CLARK **30.**

†*Linthia spiennesensis*, LAMBERT **90.**

Lovenia with *L. camarota* p. 253 **sp. n.** Torres Strait, CLARK Mem. Mus. Comp. Zool. Harvard **46** pp. 251–258.

†*Lovenia dumblei* **sp. n.** Tertiary Mexico, DICKERSON & KEW Proc. Calif. Acad. Sci. **7** p. 136.

Lytechinus variegatus larva, MORTENSEN **111.**

†*Macropneustes mexicanus* **sp. n.** Tertiary Mexico, DICKERSON & KEW Proc. Calif. Acad. Sci. **7** p. 134.—*M. antillarum* figd. ibid. pls. xxiv, xxvi.

†*Magnosia elisae* **sp. n.** (= *M. decorata* auctt. non Desor), LAMBERT & THIÉRY Ess. nom. Échin. **1914** p. 270.

Maretia peloria **sp. n.** Australia, CLARK Biol. Results of F.I.S. Endeavour **4** p. 121.—*M.*, CLARK **30.**

†*Maretia planulata* figd., FOURTAU **81.**

†*Megapygus* as synonym of *Pygaster*, HAWKINS **63.**

Mellita 6-perforata larva, MORTENSEN **111.**

Meoma, CLARK **30.**

Metalia with *M. dicrana* p. 211 **sp. n.** Fiji Is., CLARK Mem. Mus. Comp. Zool. Harvard **46** pp. 209–213.

†*Metalia cumminsi* **sp. n.** Tertiary Mexico, DICKERSON & KEW Proc. Calif. Acad. Sci. **7** p. 133.

†*Micraster* with *M. belgicus* p. 5 Santonian, *duponti* p. 50 Senonian **spp. n.** Belgium, LAMBERT Mem. Mus. r. Hist. nat. Belg. **4** (4) pp. 3–8, 12–18, 38, 43–44, 50.

Microcyphus annulatus, CLARK **27.**

†*Micropeltis* vide †*Phymotaxis.*

Micropetalon, CLARK **30.**

†*Miotoxaster*, LAMBERT **92.**

Moira, CLARK **30.**

†*Monophora caldenensis* **sp. n.** Tertiary Cnile, GIGOUX Rev. Chilena Hist. Nat. **20** p. 80.

†*Mossaoudia* **gen. n.** of *Holasteridae* type *H. piriformis* auctt. non Desor, LAMBERT Bull. Soc. Sci. Yonne **70** p. 194 [but as *Messaoudia* p. 223].

Moulinsia vide *Desmoulinaster.*

Nacospatangus with *N. depressus* p. 150 **sp. n.** California, CLARK Mem. Mus. Comp. Zool. Harvard **46** pp. 149–151.

Neolampas, CLARK **30.**

†*Nucleolites orbicularis* apical system, HAWKINS **65.**

†*Offaster*, LAMBERT **90, 94.**

Oligopodia recens, epigonus, CLARK **30.**

†*Oolaster* as syn. of *Echinocorys*, LAMBERT **94**.

†*Oolopygus piriformis, gracilis*, LAMBERT **90**.

†*Orchoporus* gen. n. type *O. koehleri* L. and T. Miocene California, LAMBERT & THIÉRY Ess. nom. Échin. **1914** p. 293.

†*Orthopsis minima*, LAMBERT **92**.

†*Oxyclypeina* nom. mut. (= *Oxypleura* Pom. preocc.) LAMBERT & THIÉRY Ess. nom. Échin. **1914** p. 305.

†*Oxypleura* vide †*Oxyclypeina*.

Palaeopneustes, CLARK **30**.

Palaeotropus, CLARK **30**.

Parapneustes, CLARK **30**.

Paraster, CLARK **30**.

Paratinanthus nom. mut. (= *Paratina* Pom. 1887 non Mik. 1874) LAMBERT & THIÉRY Ess. nom. Échin. **1914** p. 303.

Parechinus notius sp. n. Australia, CLARK Biol. Results of F.I.S. Endeavour **4** p. 111.

†*Pericosmus latus* figd., FOURTAU **81**.

Peronella lesueuri, CLARK **27**.

Phelsumaster nom. mut. (=*Phelsumia* Pom. 1883 non Gray 1840) LAMBERT & THIÉRY Ess. nom. Echin. **1914** p. 316.

Phelsumasteridae trib. n. of *Dendastridae*, LAMBERT & THIÉRY t.c. p. 316.

Phelsumia vide *Phelsumaster*.

Phryssocystis, CLARK **30**.

Phyllacanthus imperialis, CLARK **27**.

†*Phyllobrissus cerceleti*, LAMBERT **92**.

†*Phymosoma* with *P. fustuarium* p. 34 sp. n. Campanian Belgium, LAMBERT Mem. Mus. r. Hist. nat. Belg. **4** (4) pp. 10, 34; *P.* with *P. jurense* p. 81 sp. n. Barremian Vaulion, LAMBERT Mem. Soc. Acad. Aube **80** pp. 60, 80.

†*Phymotaxis* nom. mut. (= *Micropeltis* Pom. 1883 non Rettenb. 1867), LAMBERT & THIÉRY Ess. nom. Échin. **1914** p. 253.

†*Pithodia* vide *Pseudodiscoides*.

Plagiobrissus, CLARK **30**.

†*Platyclypeina* nom. mut. (=*Platypleura* Pom. 1887 preocc.) LAMBERT & THIÉRY Ess. nom Echin. **1914** p. 304.

†*Platypleura* vide †*Platyclypeina*.

†*Plegiocidaris spinigera*, KILIAN & REBOUL **87**.

†*Plesiaster* cf. *bucardium* Goldf., LAMBERT **90**.

†*Plesiechinus macrostoma* (Wright) selected as genotype, HAWKINS **63**; *P. ornatus* structure, HAWKINS **66**.

Plesiozonus, CLARK **30**.

Plethotaenia gen. n. of *Spatangidae* type *Macropneustes spatangoides* Ag. CLARK Mem. Mus. Comp. Zool. Harvard **46** p. 222.

†*Pleuropygus thieryi* figd., LAMBERT & THIÉRY **95**.

Plexechinus, CLARK **30**.

Pourtalesia, CLARK **30**.

†*Polydiadema cotteaui*, LAMBERT **92**.

Prionocidaris australis, CLARK **27**.

Protenaster, CLARK **30**.

†*Psammechinus* with *P. hexaporus* p. 63 sp. n. Hauterivian France, LAMBERT Mem. Soc. Acad. Aube **80** pp. 62-63.

†*Pseudholaster*, LAMBERT **94**.

Pseudocidaris clunifera, LAMBERT **92**, **93**.

Pseudodiadema, LAMBERT **92**; RAVN **122**.

†*Pseudodiscoides* nom. mut. (= *Pithodia* Pomel 1883 non Pasc. 1865) LAMBERT & THIÉRY Ess. nom. Échin. **1914** p. 282.

Pseudolovenia, CLARK **30**.

†*Pseudopyrine pygaea*, LAMBERT **93**.

Pycnolampas, CLARK **30**.

†*Pygaster semisulcatus* (Phill.) selected as genotype, HAWKINS **63**.

Raphidechinus gen. n. type *Ech. molaris* Blainv., LAMBERT & THIÉRY Ess. nom. Échin. **1914** p. 241.

†*Rhabdocidaris copeoides* figd., DOUVILLÉ **43**.

Rhyncolampas cariboearum, pacifica, CLARK **30**.

Rhynobrissus, CLARK **30**.

†*Rispolia* subgen. n. of *Nucleolites* type *N. subtrigonata* Cat., LAMBERT Bull. Soc. Sci. Yonne **70** p. 217 [but as gen. n. p. 223].

†*Rotulechinus* nom. mut. (=*Atactus* Pom. 1883 non Schin. 1868), LAMBERT & THIÉRY Ess. nom. Échin. **1914** p. 253.

†*Salenia* with *S. rutoti* p. 68 sp. n. Senonian Belgium, LAMBERT Mem. Mus. r. Hist. nat. Belg. **4** (4) pp. 65–69; *S. folium-querci, mamillata*, LAMBERT **92.**

†*Salenidia* with *S. schluteri* p. 69 sp. n. Senonian Belgium, LAMBERT Mem. Mus. r. Hist. nat. Belg. **4** (4) pp. 40, 69.

Salmacis with *S. oligopora* p. 113 sp. n. Australia, CLARK, Biol. Results of F.I.S. Endeavour **4** pp. 113–115.

†*Samlandaster* Lambert gen. n. type *Scutella germanicus* Beyr., LAMBERT & THIÉRY Ess. nom. Échin. **1914** p. 293.

Schizaster, CLARK **30.**

†*Schizaster* with *S. cristatus* p. 499 Brazil, Costa Rica, *panamensis* p. 500 Panama spp. n. Tertiary, JACKSON Proc. U.S. Nation. Mus. **53** pp. 498–500; *S. clevei, scherzeri* figd., DICKERSON & KEW **39**; *S.*, STEFANINI **130.**

†*Scutella cazonensis* sp. n. Tertiary Mexico, DICKERSON & KEW Proc. Calif. Acad. Sci. **7** p. 132.—*S. forumjuliensis* sp. n. Miocene Venetia, STEFANINI Atti Acc. Sci. Padova **8** p. 159.—*S.*, WARING **140.**

†*Spatagoides*, LAMBERT **94.**

Spatangus with *S. californicus* p. 235 sp. n. S. California, CLARK Mem. Mus. Comp. Zool. Harvard **46** pp. 233–240.—*S. purpureus* regeneration, NUSBAUM-HILAROWICZ & OXNER **116**; *S. raschi*, NORDGAARD **115.**

†*Spatangus regina*, BELL **9.**

Sphaerechinus embryology, HERLANT **71**; *S. granularis* regeneration, NUSBAUM-HILAROWICZ & OXNER **116.**

†*Stegaster*, LAMBERT **94.**

†*Stegasterinae*, LAMBERT **94.**

Sterechinus diadema, KOEHLER **89.**

†*Stereocidaris pseudohirudo*, LAMBERT **90.**

†*Sternotaxis*, LAMBERT **94.**

†*Stomechinus liasicus* sp. n. Mid-Lias Peru, TILMANN Neu. Jahrb. Min. Stuttgart Beil. Bd. **41** p. 696; *S. andinus*, JAWORSKI **85.**

Strongylocentrotus embryology, HERLANT **70, 71**, LOEB **101**; *S. drobachiensis*, GRIEG **62.**

†*Strongylocentrotus cotteaui*, BELL **9.**

†*Synochitis* subg. n. of *Stegaster* type *S. bouillei* Merc., LAMBERT Bull. Soc. Sci. Yonne **70** p. 222 [but as gen. n. p. 223].

†*Temnechinus woodi*, BELL **9.**

†*Temnodiscus* Lambert gen. n. of *Echinidae* type *Holectypus circularis* Cott. & Gauth., LAMBERT & THIÉRY Ess. nom. Échin. **1914** p. 280.

†*Temnopleurus* FOURTAU **81.**

†*Tetrodiscus auritus, bisperforatus*, FOURTAU **81.**

†*Thierychinus delaunayi* Lambert sp. n. Vesulian Indre, LAMBERT & THIÉRY Ess. nom. Échin. **1914** p. 244.

†*Tholeopelta* gen. n. (= *Eurypleura* Lamb. 1912 preocc). LAMBERT & THIÉRY t.c. p. 307.

Tiarechinae trib. n., LAMBERT & THIÉRY t.c. p. 259.

†*Tournoueraster* Lambert gen. n. type *Scutella decemfissus* Desm. LAMBERT & THIÉRY t.c. p. 294.

†*Toxaster dolosus* sp. n. Aptian France, LAMBERT Mem. Soc. Acad. Aube **80** p. 83.

Toxopneustes embryology, GOLDFARB **58, 61.**

Tripneustes esculentus larva, MORTENSEN **111.**

Tripylaster, CLARK **30.**

†*Trochotiara* with *T. pusilla* p. 52 sp. n. Valengian France, LAMBERT Mem. Soc. Acad. Aube **80** pp. 52, 71.

†*Typocidaris* with *T. arenata* p. 42 sp. n. Campanian Belgium, LAMBERT Mem. Mus. r. Hist. nat. Belg. **4** (4) pp. 34, 42, 69; *T.*, LAMBERT **92.**

Urechinus, CLARK **30.**

†*Zuffardia* gen. n. type *Ps. sanfilippoi*, CHECCHIA-RISPOLI Rend. Acc. Lincei Roma (5) **26** p. 492.

D. ASTEROIDEA.

Acanthaster brevispinus sp. n. Sulu Archipelago, FISHER Proc. Biol. Soc. Washington **30** p. 92.

Allostichaster polyplex, CLARK **27.**

Anseropoda rosacea, CLARK **27.**

Anthenia acuta, CLARK **27.**

Anthenoides, VERRILL **138.**

Asterias forbesi development, CHILD **19**; *A. rubens* nervous system, GÖTHLIN **57**; *A. ochracea* alimentation, LEWIS & JEWELL **97**; *A.* embryology, CHAMBERS **16**; CHILD **20**; *A.*, BELL **10**.

Asteridae nervous system, HILTON **75**.

Asterina atyphoidea, leptalacantha, **spp. n.**, Australia, CLARK Biol. Results of F.I.S. Endeavour **4** p. 57; *A. cristata euerces* **subsp. n.** Palawan, FISHER Proc. Biol. Soc. Washington **30** p. 91; *A. frigida* **sp. n.** Kerguelen I., KOEHLER Ann. Inst. Oceanogr. **7** (8) p. 46.

Asterinides, VERRILL **138**.

Asterinopsis, VERRILL **138**.

Asterodiscus truncatus, CLARK **27**.

Asteroidea physiology, FOSSE **55**.

Astrocles **gen. n.** of *Brisingidae* type *A. actinodetus* **sp. n.** British Columbia, FISHER Ann. Mag. Nat. Hist. **20** pp. 426, 430.

Astrogonium pareli, GRIEG **62**.

Astrolirus **gen. n.** of *Brisingidae* type *Brisinga panamensis*, FISHER Ann. Mag. Nat. Hist. **20** pp. 424, 428.

Astropecten with *A. schayeri* p. 60 Tasmania, *sagaminus* p. 64 Japan, *sinicus* p. 64 China, *progressor* p. 66, *novae-guineae* p. 136 New Guinea, *weberi* p. 75 Senegambia, *dahomensis* p. 77 Dahomey, *celebensis* p. 118 Celebes, *bandanus* p. 119 Banda Sea, *bengalensis* p. 127, *sarasinorum* p. 151, Ceylon, *mindanensis* p. 131 Mindanao, *gisselbrechti* p. 133 Hakodate, *orientalis* p. 149 E. Indies, *malayanus* p. 153, *timorensis* p. 158, Timor, *hartmeyeri* p. 156 Sharks Bay, *sumbawensis* p. 159 Sumbawa, *problematicus* p. 163, *carcharicus* p. 140, Australia, **spp. n.**, *carcharicus formosanus* p. 141 Formosa, *brasiliensis riensis* p. 84 Rio de Janeiro, *preissi albanicus* p. 162 Australia, **subspp. n.**, *platyacanthus pedicellifera* p. 95 locality unknown, *polyacanthus burbonica* p. 135 Reunion, *mauritianus mascarena* p. 143 Mauritius, *zebra sibogae* p. 156 Macassar, **varr. n.**, DÖDERLEIN Résult. Explor. Siboga Mon. **46a** pp. 1-162.—*A.* with *A. articulatus dubius* p. 165 **nom. n.** for *A. dubius* Gray; *A. comptus* p. 176 *nuttingi* p. 181 [*nuttingii* p. 221] *nitidus* p. 179 cum. var., *forcipatus*, p. 180 Florida, *A. americanus subgracilis* p. 186 S.E. United States, **spp. & varr. n.**, VERRILL Bull. Univ. Iowa **7** pp. 152-187; *A. pectinatus, preissii*, CLARK **27**; *A. aurantiacus* variation, ZIRPOLO **142**.

Astrostephane moluccana figd., FISHER **52**.

Bathybiaster spinulatus **sp. n.** Kerguelen I., KOEHLER Ann. Inst. Oceanogr. **7** (8) p. 55.—*B.*, NORDGAARD **115**.

†*Belaster* **gen. n.** of *Hudsonasteridae* type *B. ordovicus* **sp. n.** Ashgillian Ayrshire, SPENCER Palaeontogr. Soc. London **1915** [1916] p. 73.

Blakiaster VERRILL **138**.

Brisinga with *B. trachydisca* figd., FISHER **52**.

Brisingella **gen. n.** of *Brisingidae* type *B. fragilis* Fisher with *B. pusilla* **sp. n.** California, FISHER Ann. Mag. Nat. Hist. **20** pp. 423, 427.

Brisingenes **gen. n.** type *B. mimica* FISHER t.c. pp. 419, 427.

Brisingidae, FISHER **52**.

Bunaster lithodes **sp. n.** Philippines FISHER Proc. Biol. Soc. Washington **30** p. 91.

Calliaster spinosus **sp. n.** Australia, CLARK Biol. Results of F.I.S. Endeavour **4** p. 44.

†*Caractacaster* **gen. n.** of *Promopalaeasteridae* type *Palaeaster caractaci* Greg., SPENCER Palaeontogr. Soc. London **1915** [1916] p. 80.

Cheiraster diomedeae **sp. n.** Mindanao FISHER Proc. Biol. Soc. Washington **30** p. 90.—*C.* with *C. planus* p. 133, *enoplus* p. 135, **spp. n.**, W. Indies, *C. Mirabilis coronatus* p. 127 **nom. n.** for *C. coronatus* (Perr.), VERRILL Bull. Mus. Iowa **7** pp. 123-137.

Clenodiscus crispatus, GRIEG **62**.

†*Coccaster* **gen. n.** of *Hudsonasteridae* type *C. bulbiferus* **sp. n.** Silurian Herefordshire, SPENCER Palaeontogr. Soc. London **1915** [1916] p. 75.

Coronaster halicepus **sp. n.** Philippine Is., FISHER Proc. Biol. Soc. Washington **30** p. 26.—*C.*, VERRILL **138**.

Coscinasterias with *C. tenuispina atlantica* p. 20 **var. n.** Cuba, VERRILL Bull. Univ. Iowa **7** pp. 18-21.—*C.*, CLARK **27**.

Cosmasterias dyscrita **sp. n.** Australia CLARK Biol. Results of F.I.S. Endeavour **4** p. 71.

Craterobrisinga synaptoma **sp. n.** British Columbia, FISHER Ann. Mag. Nat. Hist. **20** p. 427.

Cribrella simplex granulata, KOEHLER **89.**

Cribrellopsis **gen. n.** type *C. rallieri* **sp. n.** Kerguelen I., KOEHLER Ann. Inst. Oceanogr. **7** (8) p. 37.

Crossaster multispinus **sp. n.** Australia, CLARK Biol. Results of F.I.S. Endeavour **4** p. 66.

Cycethra verrucosa figd., BELL **10.**

Dipsacaster imperialis **sp. n.** Mindoro, FISHER Proc. Biol. Soc. Washington **30** p. 89.

Distolasterias hypacantha **sp. n.** Cebu, FISHER t.c. p. 92.

Dorigona as syn. of *Ogmaster*, FISHER **50.**

Echinaster acanthodes, glomeratus, superbus, **spp. n.**, Australia, CLARK Biol. Results of F.I.S. Endeavour **4** pp. 61, 62, 64; *E. spinulifer*, KOEHLER **89**; *E.*, VERRILL **138.**

Enoplopatiria, VERRILL **138.**

Freyella, FISHER **52.**

Freyellidea **gen. n.** of *Brisingidae* type *F. microplax* **sp. n.** British Columbia, FISHER Ann. Mag. Nat. Hist. **20** pp. 425, 429–430.

Fromia polypora **sp. n.** Maria I., Tasmania, CLARK Biol. Results of F.I.S. Endeavour **4** p. 51.

†*Girvanaster* **gen. n.** of *Hudsonasteridae* type *G. sculptus* **sp. n.** Ashgillian Ayrshire, SPENCER Palaeontogr. Soc. London **1915** [1916] p. 70.

Glyphodiscus **subg. n.** of *Iconaster* type *I. perierctus*, FISHER Ann. Mag. Nat. Hist. **20** p. 173.

Goniaster, VERRILL **138.**

Henricia microplax, arcystata, **spp. n.**, Philippines, FISHER Proc. Biol. Soc. Washington **30** p. 91.—*H.* with *H. microspina* p. 48 **sp. n.** Bahamas, VERRILL Bull Univ. Iowa **7** pp. 44–49; *H. hyadesi*, CLARK **27**; *H. sanguinolenta*, GRIEG **62.**

Hippasteria phrygiana, GRIEG **62.**

†*Hudsonasteridae*, SPENCER **127.**

Huresaster hodgsoni, BELL **10.**

Iconaster longimanus, FISHER **50.**

Labidiaster annulatus, KOEHLER **89.**

Lasiaster vide *Poraniomorpha.*

Leptasterias, VERRILL **138.**

Leptoptychaster arcticus, GRIEG **62**; *L. kerguelensis*, KOEHLER **89.**

Linckia multifora, PLATE **121**; *L.* VERRILL **138.**

Lithosoma penichra **sp. n.** Philippines, FISHER Proc. Biol. Soc. Washington **30** p. 90.

Lonchotaster magnificus **sp. n.** Australia, CLARK Biol. Results of F. I. S. Endeavour **4** p. 30; *L. tartareus* designated as genotype, FISHER **50.**

Lophaster, VERRILL **138.**

Ludia vide *Luidia.*

Luidia scotti **sp. n.** Brazil, BELL Brit. Antarct. Exp. 1910 Zool. **4** p. 8; *L.* with *L. alternata bicolor* p. 203 **var. n.** Florida, VERRILL Bull. Univ. Iowa **7** pp. 199–209; *L. porteri* **sp. n.** Chile, CLARK Proc. Biol. Soc. Washington **30** p. 153.—*L. superba* **sp. n.** Colombia, CLARK t.c. p. 171.—*L. forficifer, maculata*, CLARK **27.**—*Ludia foliata* figd., HILTON **74.**

Luidiaster, VERRILL **138.**

Marginaster, VERRILL **138.**

Mediaster australiensis, monacanthus, **spp. n.** Australia, CLARK Biol. Results of F. I. S. Endeavour **4** pp. 39, 41; *M.*, FISHER **50**; VERRILL **138.**

†*Mesopalaeaster primus, complicatus*, Ordovician Ayrshire, *M.* (?) *leintwardensis, ketleyi* Silurian England, **spp. n.**, SPENCER Palaeontogr. Soc. London **1915** [1916] pp. 84, 87, 89, 101.

†*Mesopalaeasteridae*, SPENCER **127.**

Metrodiridae **fam. n.**, FISHER Ann. Mag. Nat. Hist. **20** p. 171.

Mimaster gracilis **sp. n.** Australia, CLARK Biol. Results of F. I. S. Endeavour **4** p. 33.

Narcissia, VERRILL **138.**

Nardoa tumulosa **sp. n.** Sulu Archipelago, FISHER Proc. Biol. Soc. Washington **30** p. 90.

Nectria ocellata, ocellifera, CLARK **27**; *N. monacantha*, FISHER **50.**

Nymphaster pentagonus **sp. n.** Australia, CLARK Biol. Results of F. I. S.

Endeavour **4** p. 36; *N. protentus* designated as genotype, FISHER **50**.

Odinia australis **sp. n.** Australia, CLARK Biol. Results of F. I. S. Endeavour **4** p. 75; *O. magister* **sp. n.** S. Panay, FISHER Proc. Biol. Soc. Washington **30** p. 93.

Odontaster propinquus **sp. n.** South-east America, CLARK Proc. Biol. Soc. Washington **30** p. 7; *O.*, VERRILL **138**.

Ogmaster capella, CLARK **27**.

Ophidiaster confertus **sp. n.** Lord Howe I., CLARK Biol. Results of F. I. S. Endeavour **4** p. 53; *O.* with *O. alexandri* p. 91 **sp. n.** Gulf of Mexico, VERRILL Bull. Univ. Iowa **7** pp. 89–92; *O.* larva, MORTENSEN **111**.

Oreaster australis, gracilis, CLARK **27**; *O.*, VERRILL **138**.

Orthasterias, VERRILL **138**.

Paranepanthia **gen. n.** type *Nepanthia platydisca*, FISHER Ann. Mag. Nat. Hist. **20** p. 172.

Pateria (*Asterina*) *mineata* early development, HEATH **69**.

Pectinaster robustus **sp. n.** Chile, CLARK Proc. Biol. Soc. Washington **30** p. 155.—*P.* with *P. mixtus* p. 140, *gracilis* p. 145 W. Indies, *dispar* p. 148 Atlantic, **spp. n.**, VERRILL Bull. Univ. Iowa **7** pp. 137–149.

Pedicellaster reticulatus **sp. n.** Marie I., CLARK Biol. Results of F. I. S. Endeavour **4** p. 69; *P. chrophorus* **sp. n.** Celebes, FISHER Proc. Biol. Soc. Washington **30** p. 93.—*P. typicus*, GREIG **62**; *P.*, VERRILL **138**.

Pentagonaster stibarus, CLARK **27**; *P. granularis*, GRIEG **62**.

Pisaster antarcticus **sp. n.** Kerguelen I., KOEHLER Ann. Inst. Oceanogr. **7** (8) p. 30.

Plectaster decanus, CLARK **27**.

Plinthaster productus **sp. n.** Cuba, CLARK Proc. Biol. Soc. Washington **30** p. 67; *P.*, VERRILL **138**.

Plutonaster sirius **sp. n.** Chile, CLARK Proc. Biol. Soc. Washington **30** p. 151; *P.*, VERRILL **138**.

Podasterias with *P. kerguelensis* p. 24 **sp. n.** Kerguelen I., KOEHLER Ann. Inst. Oceanogr. **7** (8) pp. 20–30.

Pontaster, NORDGAARD **115**.

Porania with *P. armata* p. 43 **sp. n.** Kerguelen I., KOEHLER Ann. Inst. Oceanogr. **7** (8) pp. 42–46; *P.*, VERRILL **138**.

Poraniella, VERRILL **138**.

Poraniomorpha Dan. and Kor. (= *Rhagaster* and *Lasiaster* Sladen), FISHER **50**; *P. hispida*, GRIEG **62**.

Priamaster, FISHER **50**.

Priamasterinae **subfam. n.** of *Radiasteridae*, FISHER Ann. Mag. Nat. Hist. **20** p. 172.

Prionaster, VERRILL **138**.

†*Promopalaeaster elizae*, SPENCER **127**.

†*Promopalaeasteridae*, SPENCER **127**.

†*Promopalaeasterinae*, SPENCER **127**.

Pseudophidiaster **gen. n.** of *Linckiidae* type *P. rhysus* **sp. n.** Australia, CLARK Biol. Results of F. I. S. Endeavour **4** pp. 54, 55.

Psilaster acuminatus, CLARK t.c. p. 32.

Pteraster tetracanthus **sp. n.** Australia, CLARK t.c. p. 67; *P.* with *P. brachiatus* p. 49 **sp. n.** Kerguelen I., KOEHLER Ann. Inst. Océanogr. **7** (8) pp. 48–52; *P.*, GRIEG **62**; VERRILL **138**.

Remaster, VERRILL **138**.

Rhagaster vide *Poraniomorpha*.

Rosaster, VERRILL **138**.

Sideriaster, VERRILL **138**.

Solaster incertus **sp. n.** Kerguelen I., KOEHLER Ann. Inst. Oceanogr. **7** (8) p. 40.—*S. caribbaeus* **sp. n.** W. Indies, VERRILL Bull. Univ. Iowa **7** p. 54 [*caribaeus* on p. 219]; *S.*, BELL **10**; GRIEG **62**; NORDGAARD **115**.

†*Solaster reedi* **sp. n.** Pliocene Suffolk, BELL Geol. Mag. London **4** p. 422.

Sporasterias rupicola, perrieri, KOEHLER **89**.

Stegnaster, VERRILL **138**.

Stellaster with *S. inspinosus* p. 48 **sp. n.** Australia, CLARK Biol. Results of F. I. S. Endeavour **4** pp. 47–48.

Stenobrisinga, FISHER **52**.

Stephanasterias with *S. hebes* p. 26 **sp. n.** W. Indies, VERRILL Bull. Univ. Iowa **7** pp. 24–26.

Tarsaster disclichopus sp. n. Macassar Straits, FISHER Proc. Biol. Soc. Washington **30** p. 92.

Tosia aurata, CLARK **27**.

Trophodiscus gen. n. of *Astropectinidae* type *T. almus* sp. n. Kamchatka, FISHER Proc. U. S. Nation. Mus. **52** pp. 367, 368.

†*Uranaster kinahani*, SPENCER **127**.

†*Uranasteridae* fam. n., SPENCER Palaeontogr. Soc. London **1915** [1916] p. 104.

Zoroaster macracantha sp. n. Australia, CLARK Biol. Results of F. I. S. Endeavour **4** p. 68; *Z.*, VERRILL **138**.

E. OPHIUROIDEA.

Amphiacantha gen. n. of *Amphiurinae* type *Amphioplus acanthinus* Clark, with *A. dividua* p. 180 sp. n. Japan, MATSUMOTO J. Coll. Sci. Tokyo **38** (2) pp. 150, 177.

Amphichilus gen. n. of *Amphiurinae* type *A. trichoides* sp. n. Japan, MATSUMOTO t.c. pp. 150, 175.

Amphilepididae, MATSUMOTO t.c. pp. 144–149.

Amphilepis, CLARK **28**.

Amphiophiura colleta sp. n. Australia, CLARK Biol. Results of F. I. S. Endeavour **4** p. 93; *A.*, CLARK **28**.

Amphioplus affinis, KOEHLER **89**.

Amphiura eugeniae, angularis, KOEHLER **89**; *A.*, CLARK **27, 28**.

†*Amphiura lymani* sp. n. Upper Cretaceous California, WARING Proc. Calif. Acad. Sci. **7** p. 58.

Amphiuridae, MATSUMOTO **107**.

Amphiurinae, MATSUMOTO **107**.

Astero—vide *Astro*—.

Astroconus australis, CLARK **27**.

Astrodendrum pustulatum sp. n. Australia, CLARK Biol. Results of F. I. S. Endeavour **4** p. 84.

Astronychinae, MATSUMOTO **107**.

Astronyx loveni, CLARK **27**.

Astroporpa wilsoni sp. n. New Zealand, BELL Brit. Antarct. Exp. 1910 Zool. **4** p. 7; *A. australiensis*, CLARK **27**.

Astroschema monobactrum sp. n. Marquesas Is., CLARK Bull. Mus. Comp. Zool. Harvard Coll. **61** p. 430.—*A. elegans* sp. n. New Zealand, BELL Brit. Antarct. Exp. 1910 Zool. **4** p. 7.

Astroschematinae, MATSUMOTO **107**.

Astrothamnus rugosus sp. n. Australia, CLARK Biol. Results of F.I.S. Endeavour **4** p. 85.

Astrotoma benhami sp. n. New Zealand, BELL Brit. Antarct. Exp. 1910 Zool. **4** p. 8.

Astrotominae, MATSUMOTO **107**.

Chilophiurida, MATSUMOTO **107**.

Conocladus amblyconus, oxyconus, CLARK **27**.

Ctenamphiura sinensis sp. n. North China, CLARK Proc. Biol. Soc. Washington **30** p. 15.

Euryale aspera, CLARK **27**.

Gnathophiurida, MATSUMOTO **107**.

Gorgonocephalidae, MATSUMOTO **107**.

Gorgonocephalus eucnemis, GRIEG **62**; HILTON **73**.

Hemieuryalidae, MATSUMOTO **107**.

Laemophiurida, MATSUMOTO **107**.

Ophiacantha with *O. quadrispina* p. 432 sp. n. Galapagos Is., CLARK Bull. Mus. Comp. Zool. Harvard Coll. **61** pp. 431–435; *O. heterotyla*, CLARK **27**; *O. bidentata*, GRIEG **62**; *O. vivipara*, KOEHLER **89**.

Ophiacanthidae, MATSUMOTO **107**.

Ophiactininae, MATSUMOTO **107**.

Ophiactis with *O. symbiota* p. 88 sp. n. Australia, CLARK Biol. Results of F. I. S. Endeavour **4** pp. 87–88; *O.*, CLARK **28**.

Ophiernus, CLARK **28**.

Ophiobyrsa rudis, CLARK **27**.

Ophiobyrsinae, MATSUMOTO **107**.

Ophiocnida cubana sp. n. Cuba, CLARK Proc. Biol. Soc. Washington **30** p. 69.

Ophiochitonidae, MATSUMOTO **107**.

Ophiocoma, CLARK **28**.

Ophiocomidae, MATSUMOTO **107**.

Ophiocreas phanerum sp. n. Australia, CLARK Biol. Results of F. I. S. Endeavour **4** p. 79.

Ophiocrene, MATSUMOTO **107**.

Ophiocten squamosum sp. n. Chile, CLARK Proc. Biol. Soc. Washington **30** p. 157; *O. sericeum*, GRIEG **62**.

Ophioderma pentacantha sp. n. Galapagos Is., CLARK Bull. Mus. Comp. Zool. Harvard Coll. **61** p. 443; *O. panamensis, annulata* nervous system, HILTON **76**.

Ophiodermatidae, MATSUMOTO **107**.

Ophiodermatinae, MATSUMOTO **107**.

Ophiogeron, CLARK **28**.

Ophioglypha ambigua, brevispina, KOEHLER **89**.

Ophiolepididae, MATSUMOTO **107**.

Ophiolepidinae, MATSUMOTO **107**.

†*Ophiolepis damesii*, EMBREY **45**.

Ophioleucidae, MATSUMOTO **107**.

Ophiomastix bispinosa sp. n. Paumotu Is., CLARK Bull. Mus. Comp. Zool. Harvard Coll. **61** p. 442.

Ophiomusium with *O. canaliculatum* p. 448 Pacific, *tripassalotum* p. 451 Paumotu Is., spp. n., CLARK t.c. pp. 448–452.

Ophiomyxa brevirima, BELL **10**; *O. australis*, CLARK **27**.

Ophiomyxinae, MATSUMOTO **107**.

Ophionereis schayeri, CLARK **27**; *O.* larva, MORTENSEN **111**; *O.*, CLARK **28**.

Ophionotus hexactis, KOEHLER **89**.

Ophiopezella, CLARK **28**.

Ophiopholis aculeata, GRIEG **62**.

Ophiophthalmus gen. n. of *Ophiacanthidae* type *Ophiacantha cataleimmoida* Clark, MATSUMOTO J. Coll. Sci. Tokyo **38** (2) pp. 93, 106.

Ophiopteron alatum sp. n. North China, CLARK Proc. Biol. Soc. Washington **30** p. 13.

Ophiosemnotes gen. n. of *Ophiacanthidae* type *Ophiolebes tylota* Clark, MATSUMOTO J. Coll. Sci. Tokyo **38** (2) pp. 93, 135.

Ophiosteira kochleri sp. n. Ecuador, CLARK Proc. Biol. Soc. Washington **30** p. 173; *O. antarctica* figd., BELL **10**.

Ophiothamnus, MATSUMOTO **107**.

Ophiothela hadra, CLARK **27**.

Ophiothrix, CLARK **27**, **28**; *O. fragilis* larva, MORTENSEN **111**.

Ophiotrichidae, MATSUMOTO **107**.

Ophiotypa, CLARK **28**.

Ophiozonella, CLARK **28**.

Ophiura with *O. stenobrachia* p. 446 sp. n. Eastern Pacific, CLARK Bull. Mus. Comp. Zool. Harvard Coll. **61** pp. 445–448; *O. robusta*, GRIEG **62**.

Ophiuroidea, B. **2**.

Ophiurothamnus gen. n. of *Ophiacanthidae* type *Ophiomitra dicycla* Clark, MATSUMOTO J. Coll. Sci. Tokyo **38** (2) pp. 94, 129.

Pectinura dyscrita, CLARK **27**.

Phrynophiurida, MATSUMOTO **107**.

Trichasterinae, MATSUMOTO **107**.

F. CRINOIDEA.

Amphimetra crenulata, CLARK **27**.

Antedon, BELL **10**.

†*Antedon* with *A: minutissimus* p. 169, *janeti* p. 170, *courvillensis* p. 172, spp. n., Senonian France, VALETTE Bull. Soc. Sci. Yonne **70** pp. 165–174.

†*Atactocrinus*, BATHER **5**.

†*Balanocrinus doliolum, epensensis, minutus, senonensis* spp. n., Senonian France, VALETTE Bull. Soc. Sci. Yonne **70** pp. 145, 147, 149, 151; *B. didactylus, subbasaltiformis* (=*sowerbyi* Wetherell MS.) figd., BATHER **7**.

†*Bursacrinus*, MACNAIR **104**.

Comantheria intermedia sp. n. Japan, CLARK Proc. Biol. Soc. Washington **29** p. 105.

Comanthus perplexum, plectrophorum, spanoschistum spp. n. Australia, CLARK Biol. Results of F.I.S. Endeavour **4** pp. 14, 15, 17.

Comatula cratera sp. n. Australia, CLARK t.c. p. 12.

Comsometra incommoda, loveni, CLARK t.c. p. 26.

†*Conocrinus lamberti, welschi* spp. n. Senonian France, VALETTE Bull. Soc. Sci. Yonne **70** pp. 113, 115.

Cosmiometra dasybrachia sp. n. Australia, CLARK Biol. Results of F.I.S. Endeavour **4** p. 24.

†*Cyathocrinus pinnatus* (?), FAURA Y SANS **46**.

Dichometra dofleini sp. n. Japan, CLARK Proc. Biol. Soc. Washington **29** p. 106.

†*Embryocrinus problematicus* **sp. n.** [locality not mentioned], HUDSON Bull. Geol. Soc. Amer. **28** p. 204.

†*Encrinus cassianus*, DORNYAY **42**; *E.*, FAURA Y SANS **46**.

†*Entrochus silesiacus*, DORNYAY **42**.

†*Graphiocrinus*, MACNAIR **104**.

†*Habrocrinus*, FOERSTE **54**.

Heliomētra glacialis, GRIEG **62**.

†*Hydrēionocrinus scoticus*, MACNAIR **104**.

†*Isocrinus* with *I. sancti-paterni* p. 128 *affinis* p. 132, *granosus* p. 133, *hureae* p. 135, *neuvillensis* p. 138, *icaunensis* p. 139, *courvillensis* p. 142, **spp. n.**, Senonian France, VALETTE Bull. Soc. Sci. Yonne, **70** pp. 124-144.

Isometra vivipara **sp. n.** Antarctic, MORTENSEN Vid. Dansk naturh. Foren. **68** p. 208.

†*Lampterocrinus inflatus-minor* **var. n.** Silurian Ohio, FOERSTE Ohio J. Sci. **17** p. 239.

†*Marsupites* VALETTE **137**.

†*Merocrinus*, BATHER **4**.

Metacrinus cyaneus **sp. n.** Australia, CLARK Biol. Results of F.I.S. Endeavour **4** p. 9.

†*Millericrinus echinatus, rotiformis, goupili* figd., DOUVILLÉ **43**.

Nemaster insolitus **sp. n.** Caribbean Sea, CLARK Proc. Biol. Soc. Washington **30** p. 65.

Neocomatella ornata **sp. n.** Cuba, CLARK t.c. p. 63.

Notocrinus **gen. n.** type *N. virilis* **sp. n.** Antarctic, MORTENSEN Vid. Dansk naturh. Foren. **68** p. 206.

Oligometra zebra **sp. n.** Australia, CLARK Biol. Results of F.I.S. Endeavour **4** p. 22.

Oreometra pericalla **sp. n.** Australia, CLARK t.c. p. 20.

†*Ottawacrinus*, BATHER **3**.

†*Pentacrinus* aff. *jurensis* Quenst., TILMANN Neu. Jahrb. Min. Stuttgart Beil. Bd. **41** p. 699.—*P. lamberti* **sp. n.** Senonian France, VALETTE Bull. Soc. Sci. Yonne **70** p. 121.—*P.*, DOUVILLÉ **43**.

†*Periechocrinus cylindricus* **sp. n.** Silurian Ohio, FOERSTE Ohio J. Sci. **17** p. 244.

†*Pisocrinus globularis*, MACNAIR **104**.

†*Platycrinus*, MACNAIR **104**.

†*Porocrinus smithi* respiratory organs, HUDSON **78**.

†*Poteriocrinus minutus* (?), FAURA Y SANS **46**.

Promachocrinus kerguelēnsis, BELL **10**.

Prometra owstoni **sp. n.** Japan, CLARK Proc. Biol. Soc. Washington **29** p. 106.

Ptilometra macronema, mülleri, CLARK **27**.

Rhyzocrinus lofotensis, NORDGAARD **115**.

†*Scyphocrinus* cf. *elegans*, FAURA Y SANS **46**.

Tropiometra carinata habits, CLARK **29**; larva, MORTENSEN **111**.

†*Uintacrinus*, VALETTE **137**.

†*Ulocrinus*, MACNAIR **104**.

†*Volvola* with *V. elliptica cylindrica* p. 98 **var. n.**, *V. maxima* p. 101, *hureae* p. 104, *lagenalis* p. 109, **spp. n.**, Senonian France, VALETTE Bull. Soc. Sci. Yonne **70** pp. 86-111.

Zygometra elegans, microdiscus, CLARK **27**.

G. CYSTIDEA.

†*Caryocrinites ornatus*, FOERSTE **53**.

†*Comarocystites punctatus, obconicus, shumardi*, FOERSTE **53**.

†*Cyclocystoides*, RAYMOND **123**.

†*Echinosphaerites* cf. *balticus* Eichw., FAURA Y SANS **46**.

†*Gogia* **gen. n.** of *Eocystidae* type *G. prolifica* **sp. n.** Cambrian Alberta WALCOTT Smithsonian Misc. Coll. **67** p. 68.

†*Shafferia* **gen. n.** of *Eocystidae* type *S. cisina* **sp. n.** Cambrian British Columbia, WALCOTT t.c. p. 71

†*Steganoblastus*, HUDSON **79**.

†*Trochocystites*, FAURA Y SANS **46**.

H. BLASTOIDEA.

†*Pentremites* with *P. saxiomontanus* p. 363, *divergens* p. 365, *altimarginatus* p. 366, **spp. n.**, Carboniferous Montana, CLARK Bull. Mus. Comp. Zool. Harvard **61** pp. 363-371.

†*Schizoblaster* with *S. haynesi* p. 371 **sp. n.** Carboniferous Montana, CLARK t.c. pp. 371-373.

VI. VERMIDEA

ARRANGED BY

J. S. DUNKERLY.

CONTENTS

PAGE

TITLES (for all groups) 3

PLATYHELMINTHIA, NEMERTINEA, MESOZOA.

SUBJECT INDEX:—

Comprehensive and General=1203 14
Structure=1207 14
Physiology=1211 14
Development=1215 14
Ethology=1219 14
Variation, Phylogeny=1223 15
Distribution (Geography)=1227 15

SYSTEMATIC=1231:—

Platyhelminthia 15
Turbellaria 15
Trematoda 16
Cestoda 18
Nemertinea 19
Mesozoa (vacant)

NEMATHELMINTHIA.

SUBJECT INDEX:—

Comprehensive and General=1403 19
Structure=1407 19
Physiology=1411 19
Development=1415 19
Ethology=1419 19
Variation, Phylogeny=1423 20
Distribution (Geography)=1427 20

SYSTEMATIC=1431:—

Nematoda 20
Nematomorpha 22
Acanthocephala 22

CHAETOGNATHA, GASTROTRICHA, ROTIFERA.

PAGE

SUBJECT INDEX :—

Comprehensive and General=1603 22
Structure=1607 23
Physiology=1611 23
Development=1615 23
Ethology=1619 23
Variation, Phylogeny=1623 23
Distribution (Geography)=1627 23

SYSTEMATIC=1631 :—

Chaetognatha 23
Gastrotricha 23
Rotifera 23

ANNELIDA, GEPHYREA, PRIAPULOIDEA. PHORONIDEA, PTEROBRANCHIATA.

SUBJECT INDEX :—

Comprehensive and General=1803 23
Structure=1807 24
Physiology=1811 24
Development=1815 24
Ethology=1819 24
Variation, Phylogeny=1823 24
Distribution (Geography)=1827 24

SYSTEMATIC=1831 :—

Annelida 25
Archiannelida 25
Polychaeta 25
Myzostomida (vacant).
Oligochaeta 27
Hirudinea 27
Echiuroidea (vacant).
Gephyrea (Sipunculoidea) 28
Priapuloidea (vacant).
Phoronidea 28
Pterobranchiata (vacant).

I.—TITLES.

Abbott, J. F. The blood cells of *Thallasema mellita.* Washington Univ. Studies St. Louis No. **1** 1913 (3-9). **1**

Ackert, J. E. A means of transmitting the fowl nematode, *Heterakis papillosa* Bloch. Science N.Y. **46** 1917 (394). **2**

Ackert, J. E. and **Grant,** A. A. Another Cestode from the young cat. Trans. Amer. Micr. Soc. **36** (93-96). **2a**

Akashi, S. [*Davainea formosana* nov. sp. a new tape-worm reported from Formosa and Tokyo. Taiwan Ig. Zassi No. **167** 1916.] Abs. in Trop. Dis. Bull. **10** 1917 p. 123. **3**

Ando, R. Suggestions as to prophylaxis of *Paragonimus westermanni.* [Med. News Domestic & Foreign No. **856** 1915 (202-203).] Abs. in Trop. Dis. Bull. **10** 1917 p. 109. **4**

André, E. Contribution à l'étude de la faune helminthologique de la Suisse. Rev. Suisse Zool. **25** 1917 (169-177). **5**

Araoz, J. M. *vide* Biglieri, R.

Baermann, G. Eine einfache Methode zur Auffindung von *Ankylostomum* (Nematoden) Larven in Erdproben. Batavia Tydschr. Geneesk Ned. Ind. **57** 1917 (131-137): Weltevreden Meded. Geneeskundig Lab. Feestbundel 1917 (41-47). **6**

Ball, S. C. The development of *Paravortex gemellipara* (*Graffilla gemellipara* Linton). J. Morph. Philadelphia Pa. **27** 1916 (453-558). **7**

Barker, F. D. Polyradiate Cestodes. Science N. Y. **43** 1916 (170-171). **7a**

Barker, F. D. A new Monostome Trematode parasitic in the Muskrat with a key to the parasites of the American Muskrat. Trans. Amer. Microsc. Soc. Decatur Ill. **35** 1916 (175-184). **7b**

Barker, F. D. and **Parsons,** S. A monostome lungfluke from the painted terrapin *Chrysemys marginata* Agassiz. Trans. Amer. Micr. Soc. **36** 1917 (55-66). **8**

Barreto, A. L. de B. Notas helminthologicas. i. Sobre o genero *Allodapa* Diesing 1890. Brazil-Medico **31** 1917 (243-244). **9**

Barreto, A. L. de B. Notas helminthologicas. ii. Sobre o genero *Oxynema* Linstow 1899. Brazil-Medico **31** 1917 (305). **10**

Barthélemy, E. Essai de Coprologie microscopique. Diagnostic microscopique des Maladies parasitaires à Protozoaires et à Helminthes. Paris Vigot Frères 1917 (1-128). **11**

Beauchamp, P. de. Nouvelles recherches sur la sexualité chez *Dinophilus.* Paris C. R. Acad. Sci. **164** 1917 (56-58). **12**

Beauchamp, P. de. Sur quelques parasites provenant du Congo belge. Rev. Zool. Afric. **4** 1914 (109-116). **13**

Becker, J. G. A further note on Bilharziosis in the Transvaal. S. Africa Med. J. **12** 1916 (42). **14**

Beddard, F. E. On the Scolex in the Cestode genus *Duthiersia,* and on the species of that genus. Proc. Zool. Soc. **1917** 1917 (73-82). **15**

Benham, W. B. Report on the Polychaeta obtained by the F.I.S. "Endeavour" on the coasts of New South Wales, Victoria, Tasmania and South Australia. Pt. i. Fisheries Commonw. of Australia **3** Sydney 1915 (173-237). **16**

Benham, W. B. Report on the Polychaeta obtained by the F.I.S. "Endeavour" on the Coasts of New South Wales, Victoria, Tasmania and South Australia. Pt. ii. :—III. Report on the Gephyrean *Priapulus* obtained by the F.I.S. "Endeavour" in Australian Waters. Fisheries Commonw. of Austr. **4** pts. 2 & 3 Sydney 1916 (127-162). **17**

Bergström, E. Die Polynoiden der schwedischen Südpolarexpedition 1901–1903. Zool. Bidrag fran Uppsala **4** 1916 (269–304). **18**

Bigelow, H. B. Explorations of the Coast Water between Cape Cod and Halifax in 1914 . . . Oceanography and Plankton. Bull. Mus. Comp. Zool. Harv. Coll. **61** 1917 (163–357). **19**

Biglieri, R. and **Araoz**, J. M. Contribucion al estudio de una nueva filariosis humana encontrada en la Republica Argentina (Tucuman) occasionada por la "Filaria Tucumana." Buenos Aires 1917 8vo (1–22). **20**

Blanchard, R. Encore un cas de *Dipylidium caninum* à Paris. Paris Arch. Parasitol. **16** 1914 (438–448). **21**

Blanchard, R. Monographie des Hémadipsines (Sangsues terrestres). Paris Bull. Soc. Path. exot. **10** 1917 (640–675). **22**

Bonnet, A. Anomalie de l'appareil génital male de la sangsue. Paris Arch. Parasitol. **16** 1914 (432–433). **23**

Borg, F. Über die Spirorbisarten Schwedens nebst einem Versuch zu einer neuen Einteilung der Gattung *Spirorbis*. Zool. Bidrag fran Uppsala **5** 1917 (15–38). **24**

Borini, A. Pseudo-appendicite da Ascaridi. Paris Arch. Parasitol. **16** 1914 (428-431). **25**

Boulenger, C. L. Sclerostome parasites of the horse in England. II. New species of the genus *Cylichnostomum*. Parasitol. Cambr. **9** 1917 (203–212). **26**

Bouttier, H. and **Molard**, E. Un cas de kyste hydatique du cerveau chez l'homme. Paris C. R. soc. biol. **80** 1917 (842–844). **27**

Boynton, W. H. and **Wharton**, L. D. A fatal parasitic infestation in a herd of cattle and goats in Ambos Camarines province. Phil. J. Sci. Bull. **1916** 1916 (285–290). **28**

Brémont, E. and **Léger**, M. La Filariose de Bancroft à la Guyane française dans ses rapports avec les manifestations lymphatexiques. Paris Bull. Soc. Path. exot. **10** 1917 (896–900). **29**

Brinkmann, A. Die pelagischen Nemertinen (Monographisch dargestellt). Bergens mus. Skrifter Bd. **3** (1) 1917 (1–194). **30**

Bryce, D. Notes on the collection of Bdelloid and other Rotifera. J. Quek. Micr. Club **13** 1917 (205–230). **31**

Bullock, F. D. *vide* **Rohdenburg**, G. L.

Capus, J. Sur un dépérissement des cultures de Pois en Gironde dû à la double action de l'*Heterodera schachtii* et du *Fusarium vasinfectum*. Bull. Soc. Etude Vulg. Zool. Agric. Bordeaux **16** 1917 (7–8 70–73 87–91). **32**

Carini, A. and **Maciel**, J. Sobre algunas microfilarias de mammiferos do Brazil. Buenos Aires 1917 (1–8). **33**

Carr, J. W. The Invertebrate Fauna of Nottinghamshire. 8vo Nottingham (J. & H. Bell) 1916 (i–viii 1–617). **33a**

Caullery, M. *vide* Mesnil, F.

Cawston, F. G. The Cercariae of Natal. Jl. Parasitol. **3** 1917 (131–135). **34**

Cawston, F. G. Prophylaxis in Bilharziasis. J. Trop. Med. & Hygiene **20** 1917 (49–50). **34a**

Cawston, F. G. Bilharzia prophylaxis. S. African Med. Rec. **15** 1917 (38–39). **35**

Charrier, H. Sur l'existence de phénomènes de "dédifférenciation musculaire" pendant la transformation de la *Nereis fucata* Sav. en *Heteronereis*. C. R. soc. biol. **80** 1917 (878–879). **36**

Child, C. M. Studies on the dynamics of morphogenesis and inheritance in experimental reproduction. 8. Dynamic factors in head-determination in *Planaria*. J. Exp. Zool. Philadelphia **17** 1914 (61–79). **37**

Child, C. M. Differential susceptibility and differential inhibition in the development of polychete annelids. Journ. Morph. Philad. **30** 1917 (1–64). **38**

Cholodkovsky, N. Contribution à la connaissance des cysticerques d'oiseaux. Paris C. R. soc. biol. **80** 1917 (219–222). **39**

Ciurea, J. Die Auffindung der Larven von *Opisthorchis felineus*, *Pseudamphistomum danubiense* und *Metorchis*

albidus und die morphologische Entwicklung dieser Larven zu den geschlechtsreifen Würmern. Zs. Infektkrankh. Haustiere Berlin **18** 1917 (301-333). **40**

Clapier. Les porteurs de kystes Filariens (*Onchocerca volvulus*) et de nodosités juxta-articulaires en pays Toma (Region militaire de la Guinée). Paris Bull. Soc. Path. exot. **10** 1917 (150-157). **41**

Cleave, H. J. van. *Filicollis botulus* n. sp. with notes on the characteristics of the genus. Trans. Amer. Microsc. Soc. **35** 1916 (131-134). **41a**

Cleave, H. J. van. Acanthocephala of the genera *Centrorhynchus* and *Mediorhynchus* (new genus) from North American birds. Trans. Amer. Microsc. Soc. Decatur Ill. **35** 1916 (221-232). **41b**

Cobb, N. A. A new parasitic Nematade *Tylenchus penetrans* found infesting cotton and potatoes. Journ. Agric. Res. **11** 1917 (27-33). **42**

Cobb, N. A. Segmentation in Nematodes. Observations bearing on the unsettled question of the relationship of nematodes to other branches of the Animal Kingdom. Science N.Y. **45** 1917 (593). **43**

Colgan, N. Observations on Phototropism and the Development of eyespots in the marine Nemertine, *Lineus gesserensis*. Irish Nat. **25** 1916 (7-12). **44**

Commes, C. L'Eau du Niger et l'helminthiase intestinale. Paris Bull. Soc. Path. exot. **10** 1917 (730). **45**

Commes, C. and **Devanelle,** P. L'Onchocercose aortique bovine dans le Haut-Sénégal-Niger. Paris Bull. Soc. Path. exot. **10** 1917 (459-460). **46**

Conreur, C. and **Urbain,** G. Enterite hemorrhagica dos cães novos Uncinariose intestinal. Arch. Brasil. Med. **6** 1916 (560-563). **47**

Cooper, A. R. Contributions to the life history of *Protocephalus ambloplitis* Leidy. A parasite of the Black Bass. Contr. Canadian Biol. Ottawa **1911-14** fasc. 2 1915 (177-194). **48**

Cort, W. W. North American frog lung flukes. Trans. Amer. Micr. Soc. **34** 1915 (203-240). **49**

Davis, John J. A nematode parasite of Root Aphids. Psyche Boston Mass. **23** 1916 (39-40). **50**

Delanoë, P. Au sujet de l'existence dans le Cercle des Doukkala (Maroc Occidental) de la sangsue de cheval, *Limnatis nilotica* Savigny. Paris Bull. Soc. Path. exot. **10** 1917 (458-459). **51**

Dequal, L. Nuovi dati sulla distribuzione degli Irudinei in Italia. Torino Boll. Mus. Zool. Anat. **31** 1916 No. 713 (1-8). **51a**

Dequal, L. Irudinei [in] Viaggio del Dott. E. Festa nel Ecuador. Torino Boll. Mus. Zool. Anat. **31** 1916 No. 717 (1-20). **52**

Dequal, L. Nuovi Irudinei esotici del Museo Zoologico di Torino. Torino Boll. Mus. Zool. Anat. **32** No. 724 (1-20). **52a**

Devanelle, P. *vide* **Commes,** C.

Dévé, F. Pathogénie des affections parasitaires non-microbiennes du foie chez l'homme. Paris Arch. Parasitol. **16** 1913 (211-281). **53**

Dévé, F. La membrane d'enkystement péritonéal dans le cholépéritoine hydatique. C. R. soc. biol. **80** 1917 (452-454). **54**

Dévé, F. Échinococcose herniaire. C. R. soc. biol. **80** 1917 (804-805). **55**

Dévé, F. Les kystes hydatiques primitifs multiples chez l'homme. C. R. soc. biol. **80** 1917 (859-860). **56**

Dickinson, C. G. A case of splenic abscess secondary to invasion of the stomach wall of a horse by *Spiroptera megastoma*. Vet. Jl. **73** 1917 (14 15). **57**

Dickinson, C. G. and **Hill,** G. F. Investigations into the cause of worm nodules (*Onchocerca gibsoni*) in cattle. Melbourne Govt. Printing Off. 1916 (1-7). **58**

Ditlevsen, H. Annelids. I. The Danish Ingolf Expedition **4** Part 4 4to 1917 (1-71). **59**

Douma, S. Uber einige fälle von Sklerostomiasis bei Füllen und Pferden. Berlin Tier. Wochenschr. **33** 1917 (208-210). **60**

Dubois, A. *Onchocerca volvulus* et l'Eléphantiasis dans le Haut-Ouellé (Congo belge). Paris Bull. Soc. Path. exot. **10** 1917 (365-371). **61**

Etheridge, R. An additional Annelid jaw from the Upper Silurian of Bowning. Sydney N.S.W. Rec. Austr. Mus. **11** 1917 (221). **62**

Evans, F. A. Exhibition of case. [Cysticercus cellulosa cerebralis.] Baltimore Bull. Johns Hopkins Hosp. **26** 1915 (87-88). **63**

Fantham, H. B., **Stevens**, J. W. W. and **Theobald**, F. V. The animal parasites of man. London (Bale, Sons and Danielsson) 1917 (i-xxxii 1-900). **64**

Faria, G. de. Nota sobre *Agchylostoma brasiliense* G. de Faria 1910. Mem. Inst. Oswaldo Cruz Rio de Jan. **8** 1916 (71-73). **65**

Faust, E. C. Notes on the Cercariae of the Bitter Root Valley, Montana. Jl. Parasitol. **3** 1917 (105-123). **66**

Fauvel, P. Annélides polychètes de l'Australie méridionale. Arch. Zool. Paris **56** 1917 (159-278). **67**

Filipjev, J. Un Nématode libre nouveau de la mer Caspienne, *Chromadorissa* gen. nov. (Chromadoridae). Rev. Zool. Russe Moscou **2** 1917 (29-30). **68**

Foerste, A. F. Upper Ordovician formations in Ontario and Quebec. Ottawa Canada Dept. Mines Geol. Surv. Mem. **83** 1916 (1-279). **69**

Ford, *vide* **Merrill**, J. H.

Foshee, A. M. *vide* **Kepner**, W. A.

Foster, W. D. A further note on polyradiate Cestodes. Science N.Y. **44** 1916 (388-389). **69a**

Foster, W. D. *vide* **Ransom**, B. H.

Fuhrmann, O. Ein neuer getrenntgeschlechtiger Cestode. Zool. Anzeiger **44** 1914 (611-620). **70**

Fujii, H. *vide* Shimamura, T.

Fujinami, A. [Immunity to Macroparasitic diseases. Can it be acquired? Kyoto Igaku Zassi **22** 1916 (176-185).] Abstract in Trop. Dis. Bull. **10** 1917 p. 107. **71**

Galli-Valerio, B. Parasitologische Untersuchungen und Beiträge zur parasitologischen Technik. Centralbl. f. Bakt. I Orig. **79** 1917 (41-48). **72**

Garcia, F. Common intestinal parasites. Philippine J. Sci. B **12** 1917 (25-32). **73**

Garrey, W. E. and **Moore**, A. R. Peristalsis and co-ordination in the earthworm. Amer. J. Physiol. Baltimore **39** 1915 (139-148). **74**

Gedoelst, L. Notes sur la faune parasitaire du Congo belge. Rev. Zool. Africaine **5** 1916 (1-90). **74a**

Gedoelst, L. Nématodes parasites du *Sciurus Prevosti* de Sumatra. Rev. Zool. Africaine **5** 1917 (153-162). **75**

Germain, L. and **Joubin**, L. Chétognathes provenant des campagnes de l'"Hirondelle" et de la "Princesse Alice" (1885-1910). Result. Camp. Sci. Monaco fasc. **49** 1916 (1-118.) **76**

Gilchrist, J. D. F. On the development of the Cape *Cephalodiscus* (*C. gilchristi*, Ridewood) Q. J. Micr. Sci. **62**, 1917 (189-211). **77**

Glines, W. A. Intestinal parasites as cause of Appendicitis. Bol. Assoc. Med. de Puerto Rico **13** 1916 (249-251). **78**

Gonzalez, E. *vide* **Iturbe**, J.

Goto, S. and **Kikuchi**, H. Two new Trematodes of the family *Gyrodactylidae*. Tokyo J. Coll. Sci. **39** art. 4 1917 (1-22). **79**

Grant, A. A. *vide* **Ackert**, J. E.

Gravier, J. Sur l'association d'une Éponge siliceuse, d'une Anémone de mer et d'un Annélide polychète des profondeurs de l'Atlantique. Paris C. R. Acad. Sci. **164** 1917 (333-336). **80**

Green, B. R. *vide* **Smith**, F.

Greuter, A. Beiträge zur Systematik der Gastrotrichen in der Schweiz. Rev. Suisse. Zool. **25** 1917 (35-76). **81**

Guerrini, G. Endozooparassiti dell intestino e colera (note statische). Pathologica **9** 1915 (169-171). **82**

Guerrini, G. Della emoeosinofilia nelle infestioni intestinali zooparassitarie. Paris. Arch. Parasitol. **16** 1914 (337-372). **83**

Gutberlet, J. E. Morphology of adult and larval Cestodes from poultry. Trans. Amer. Microsc. Soc. Decatur Ill. **35** 1916 (23-44). **83a**

Hall, M. C. Parasites of the dog in Michigan. J. Amer. Vet. Med. Assoc. **51** 1917 (383-396). **84**

Hall, M. C. The medicinal treatment of parasitic diseases—an undeveloped field of veterinary medicine. J. Amer. Vet. Med. Assoc. **50** 1917 (608–611). **85**

Hall, M. C. Apparatus for use in examining feces for evidences of parasitism. J. Lab. and Clin. Med. **2** 1917 (347–353). **86**

Hall, M. C. *vide* **Ransom**, B. H.

Harmer, S. F. On *Phoronis ovalis*, Strethill Wright. Q. J. Micr. Sci. **62** 1917 (115–148). **87**

Harvey, Ethel B. A review of the chromosome numbers in the Metazoa. Pt. 1. J. Morph. Philadelphia Pa. **28** 1916 (1–63) **88**

Hassall, A. The synonymy of *Oxyuris vermicularis* . . . Science N. Y. **44** 1916 (64). **88a**

Hessle, C. Zur Kenntnis der terebellomorphen Polychaeten. Zool. Bidr. fran Uppsala **5** 1917 (39–248). **89**

Hickernell, L. M. A study of desiccation in the Rotifer *Philodina roseola*, with especial reference to cytological changes. . . . Biol. Bull. Woods Hole Mass. **32** 1917 (344–406). **89a**

Hilario, J. S. and **Wharton**, L. D. *Echinostoma ilocanum* (Garrison). A report of five cases and a contribution to the anatomy of the fluke. Manila P. I. Phil. J. Sci. Sect. B **12** 1917 (165, 203–211). **89b**

Hill, G. F. *vide* **Dickinson**, C. G.

Hofsten, N. von. Turbellarien der nordschwedischen Hochgebirge. Naturw. Unters. des Sarekgebirges in Schwedisch-Lappland, gel. von Dr. Axel. Hamberg **4** Lfg. 6 Stockholm 1917 (697–742). **90**

Hofsten, N. von. Über die Gattung *Castrada* O. Schm. Zool. Bidrag fran Uppsala **5** 1917 (1–14). **91**

Hoki, R. [Report of the finding of the egg of *Hymenolepis diminuta* in men. Tokyo Iji Shinshi (=Tokyo Med. News) **1917** 1917 (161–168).] Abs. in Trop. Dis. Bull. London **10** 1917 p. 124. **92**

Honeij, J. A. *vide* **Tyzzer**, E. E.

Hopkinson, J. Rotifers living in Rhizopods' tests. Herts. Trans. Nat. Hist. Soc. **16** 1917 (269–272). **93**

Horst, R. Polychaeta errantia of the Siboga Expedition. Pt. II. *Aphroditidae* and *Chrysopetalidae*. Siboga Exped. **24** 1b Leyden (E. J. Brill) 1917 (45–143). **94**

Horst, R. On a new Aphrodite species (*Aphrod. roulei*) from the North Atlantic. Leiden Zool. Meded. **3** 1917 (261–262). **94a**

Horst, R. A contribution towards our knowledge of the Polychaeta of South Africa. Leiden Zool. Meded **3** 1917 (285–288). **94b**

Houghton, H. S. Note upon Filarial parasites from the conjunctival sac. China Med. J. **31** 1917 (25–26). **95**

Ihle, J. E. W. Eenige strongyliden uit het darmkanaal van herkauwers (2e bydrage tot eene naam lyst van de in Nederland voorkomende parasieten der huisdieren. [Einige Strongyliden aus dem Darmkanal von Wiederkäuern; 2ter Beitrag zum Verzeichnis der in den Niederlanden vorkommenden Haustierparasiten.] Tydschr. Diergen. Utrecht **44** 1917 (164–173). **96**

Ihle, J. E. W. Nog 2 strongyliden uit het darmkanaal van herkauwers. [Noch 2 Strongyliden aus dem Darmkanal von Wiederkäuern.] Tydschr. Diergen. Utrecht **45** 1918 (430–432). **97**

Ikeda, I. A new astomatous Ciliate, *Metaphrya sagittae* gen. et sp. nov., found in the coelom of *Sagitta*. Tokyo Annot. Zool. Japan. **9** 1917 (317–324). **98**

Iturbe, J. The anatomy of the Cercaria of the *Schistosomum mansoni*. New Orleans Med. and Surg. J. **70** 1917 (133). **99**

Iturbe, J. El huésped intermediario del *Schistosomum mansoni* en Venezuela. Gac. Med. de Caracas **24** 1917 (51–52). **100**

Iturbe, J. and **González**, E. The intermediate host of *Schistosomum mansoni* in Venezuela. Nat. Acad. Med. Caracas (Spec. Edit.) 1917 (1–7 + 2 pls). **101**

Janicki, C. Experimentelle Untersuchungen zur Entwickelung von *Dibothriocephalus latus* L. 1. Ueber negative Versuche junge Forellen, Hechte und Barsche direkt mit Flimmerembryonen zu infizieren. Centralbl. f. Bakt. I. Orig. **79** 1917 (443–461). **102**

Janicki, C. and **Rosen**, F. Le cycle évolutif du *Dibothriocephalus latus*. Recherches expérimentales et observations. Bull. Soc. Neuchatel des Sci. Nat. **42** 1917 (19-53). **103**

Johnston, S. J. On the trematodes of Australian birds. Sydney N.S.W. J. R. Soc. **50** 1917 (187-261). **104**

Joubin, L. *vide* **Germain**, L.

Kaburaki, T. Notizen über japanische Tricladen. Tokyo Annot. Zool. Japan. **9** 1917 (325-333). **105**

Keilin, M. D. Sur un Nématode nouveau, *Aproctonema entomophagum* n. g., n. sp., parasite d un larve d'un Diptère. C. R. Acad. Sci. Paris **165** 1917 (399-401). **106**

Kellogg, F. M. *vide* **Moore**, A. R.

Kepner, W. A. and **Foshee**, A. M. Effects of light and darkness on the eye of *Prorhynchus applanatus* Kennel. J. Exp. Zool. **23** 1917 (519-530). **107**

Kepner, W. A. and **Taliaferro**, W. H. Organs of special sense of *Prorhynchus applanatus* Kennel. J. Morph. Philadelphia Pa **27** 1916 (163-178). **107a**

La Cava, F. Il primo caso autoctono in Europa di elefantiasi de *Filaria bancrofti* con adenolinfocele e linfoscroto. Un focolaio di filariosi in provincia di Treviso. Malaria e Mal. dei paesi caldi **7** 1916 (221-225). **108**

Lane, C. *Bunostomum kashinathi* and the *Ancylostomidae*. Ind. J. Med. Res. **4** 1917 (414-439). **109**

Lane, C. Are *Echinostomum malayanum* and *Artyfechinostomum sufrartyfex* identical? Ind. J. Med. Res. **4** 1917 (440-441). **110**

Lane, C. *Ancylostoma duodenale* as a parasite of *Felis tignis*. Ind. J. Med. Res. **5** 1917 (210-216). **111**

Lane, C. Final report on the Ankylostome inquiry in the Darjeeling District of India. Ind. J. Med. Res. **5** 1917 (350-385). **112**

La Rue, G. R. Two new larval trematodes from *Thamnophis marciana* and *Thamnophis eques*. Occ. Papers. Mus. Zool. Univ. Michigan No. **35** 1917 (1-12). **113**

Lebour, M. V. The microplankton of Plymouth Sound from the region beyond the breakwater. Plymouth J. Mar. Biol. Ass. **11** 1917 (133-182). **114**

Lebour, M. V. Some parasites of *Sagitta bipunctata*. Plymouth J. Mar Biol. Ass. **11** 1917 (201-206). **115**

Leger, A. Microfilaires d'oiseaux du Sénégal. Paris Bull. Soc. exot. **10** 1917 (106). **116**

Leger, M. and **Mouzels**, P. Piroplasme et microfilaire d'un édenté, le *Bradypus tridactylus* Linné. Paris Bull. Soc. Path. exot. **10** 1917 (173). **117**

Léger, M. *vide* **Brémont**, E.

Leigh-Sharpe, W. H. *Calliobdella nodulifera* (Malm. 1863). Proc. R. Phys. Soc. Edinb. **20** 1917 (118-122). **118**

Leiper, R. T. Report on the results of the Bilharzia Mission in Egypt, 1915. Pt. IV. J. Roy. Army Med. Corps **27** 1916 (171-190). **119**

Leon, N. *Bothriocephalus taenioides*. Centralbl. Bakt. Jena I. Orig. **78** 1916 (503-504). **120**

Linton, E. Notes on two Cestodes from the spotted sting-ray. J. Parasitol. **3** 1916 (34-37). **121**

Lintz, W. Researches in trichinosis. Med. Rec. New York **90** 1916 (987-988). **122**

Livanoff, N. Notes sur l'histologie des Polychètes. Rev. Zool. Russe Moscou **2** 1917 (121-127). **123**

Lones, T. E. Rotifers of the country of the Chess and Gade. Pt. I. Herts. Trans. Nat. Hist. Soc. **16** 1917 (109-120). **124**

Lones, T. E. Rotifers of the country of the Chess and Gade. Pt. II. Herts. Trans. Nat. Hist. Soc. **16** 1917 (221-236). **125**

Lutz, A. Observações sobre a evolução do *Schistosomum mansoni*. Brazil-Medico **31** 1917 (81-82 89-90). **126**

Lyon, M. W. Filariasis. Report of two cases in the district of Columbia, and analysis of the cases reported for Eastern North America. J. Amer. Med. Assoc. **68** 1917 (118-119). **127**

MacCullum, G. A. Some new forms of parasitic worms. Zoopathologica. Sci. Contrib. New York Zool. Soc. **1** No. 2 1917 (1-75). **128**

Macfie, J. W. S. A note on the provisional identifications of worms collected at Accra. Rept. Accra Lab. London (Churchill & Co.) 1915 (80-81). **129**

Maciel, J. *vide* **Carini,** A.

M'Intosh, W. C. Notes from the Gatty Marine Laboratory, University St. Andrews. No. XL. On the Nervous System and other points in the Structure of *Owenia* and *Myriochele.* Ann. Mag. Nat. Hist. **19** 1917 (233–265). **130**

Magath, T. B. Nematode technique. Trans. Amer. Microsc. Soc. **35** 1916 (245–256). **130a**

Magath, T. B. *vide* Ward, H. B.

Maluquer, —. Organització i increment de la secció Oceanogràfica. Junta Ci. Nat. Barcelona **2** pt. 1 1917 (221). **131**

Man, J. G. de. Beitrag zur Kenntnis der in Norwegen frei in der reinen Erde lebenden Nematoden. Tijds Ned. Dierk. Ver. (2) **16** 1917 (103–119). **131a**

Marotte —. et **Morvan** —. Filariose et Natalité. Paris. Arch. Parasitol. **16** 1913 (306–313). **132**

Meek, A. On the Phoronidea. I.—*Phoronis ovalis* and *Actinotrocha branchiata.* Rept. Dove Mar. Lab. 1917 N. S. **6** 1917 (33–48). **133**

Menzel, R. Zur Kenntnis der freilebenden Nematodengattung. *Hoplolaimus* v. Daday. Eine nomenklatorische Richtigstellung. Rev. Suisse Zool. **25** 1917 (155–162). **134**

Merrill, J. H. and **Ford,** —. Life-history and habits of two new nematodes parasitic on Insects [preliminary paper]. J. agric. Res. Washington D.C. **6** 1916 (115–127). **135**

Mesnil, F. and **Caullery,** M. Sur un organisme spirochétoide (*Cristispira polydorae* n. sp.) de l'intestin d'une Annélide polychète. Paris C. R. Soc. Biol. **89** 1916 (1118). **136**

Mesnil, F. and **Caullery,** M. Un nouveau type de dimorphisme évolutif chez une Annélide polychète (*Spio martinensis* Mesn.). C. R. Acad. Sci. Paris **165** 1917 (646–648). **137**

Molard, E. *vide* **Bouttier,** H.

Montel, M. L. R. Erythème noueux et Ascaridiose intestinale. Bull. Soc. Med. Chir. de l'Indochine **7** No. 2 1916. **138**

Monticelli, F. S. Di un curioso caso di inquilinismo di un Oligochete nell' *Ammocoetes* di *Petromyzon planeri.* Napoli Boll. Soc. Nat. **29** 1916 (1917) (59–61). **139**

Moore, A. R. *vide* Garrey, W. E.

Moore, A. R. and **Kellogg,** F. M. Note on the galvanotropic response of the earthworm. Biol. Bull. Woods Hole Mass. **30** 1916 (131). **140**

Mouzels, P. *vide* **Leger,** M.

Moore, W. Rate of growth of the beef tapeworm in human beings. J. Parasit. Urbana Ill. **2** 1915 (96). **141**

Myers, F. J. Rotatoria of Los Angeles, California and vicinity, with descriptions of a new species. Proc. U.S. Nat. Mus. **52** 1917 (473–478). **142**

Nakagawa, K. [Contribution to the life-history of *Paragonimus westermanni.* Saikin Gaku Zassi No. 243 1916 (189–200).] Abs. in Trop. Dis. Bull. Lond. **10** 1917 p. 108. **143**

Nakagawa, K. Human pulmonary Distomiasis caused by *Paragonimus westermanni.* J. Exp. Med. **26** 1917 (297–323). **144**

Narabayashi, H. [Contribution to the life-history of *Schistosomum japonicum.* Kyoto Igaku Zassi **22** 1916 No. 3 (1–63).] Abs. in Trop. Dis. Bull. Lond. **10** 1917 p. 113. **145**

[**Nasonov,** N. V. Sur la faune des Turbellaria de Finlande. I & II.—(en Russe).] Petrograd Bull. Acad. Sci. Ser. **6** No. 14 (1095–1112 1235–1258]. **146**

Nicoll, W. Observations on the influence of salt and other agents in modifying the larval development of the Hookworms, *Ankylostoma duodenale* and *Necator americanus.* Parasitol. Cambridge **9** 1917 (155–189). **147**

O'Connor, F. W. *vide* Wenyon, C. M.

O'Roke, E. C. Larval Trematodes from Kansas freshwater snails. Sci. Bull. Kansas Univ. **10** No. 7 1917 (161–180). **148**

Oka, A. *Ancyrobdella biwae* n.g. n.sp., ein merkwürdiger Rüsselegel aus Biwa-See. Tokyo Annot. Zool. Japan **9** 1917 (185–194). **149**

Olofsson, O. Susswasser-Entomostraken und -Rotatorien von der Murman-Küste und aus dem nördlichsten Norwegen. Zool. Bidr. Uppsala **5** 1917 (259–294). **149a**

Ostenfeld, C. H. Catalogue des espèces de plantes et d'animaux observées dans le Plankton recueilli pendant les expéditions depuis le mois de juillet 1908 jusqu'au mois de decembre 1911. Copenhague Publ. de Circ. **70** 1916 (1–87). **150**

Painter, T. S. The effect of carbon dioxide on the eggs of *Ascaris*. [Abstract.] New York Proc. Soc. Exp. Biol. Med. **12** 1914 (62–64). **151**

Painter, T. S. The effects of carbon dioxide on the eggs of *Ascaris*. J. Exp. Zool. Philadelphia **19** 1915 (355–385). **152**

Parsons, S. *vide* Barker, F. D.

Pierantoni, U. Sull' *Heterodrilus arenicolus* Pierant. e su di una nuova specie del genere *Clitellio*. Napol. Boll. Soc. Nat. **29** 1916 (82–91). **153**

Plimmer, H. G. Report on the deaths which occurred in the Zoological Gardens during 1915, together with a list of the blood-parasites found during the year. London Proc. Zool. Soc. **1916** 1916 (77–86). **154**

Potts, J. L. A case of recurrent Bilharziosis. J. Trop. Med. and Hygiene **20** 1917 (110). **154a**

Pratt, H. S. Trematodes of the loggerhead turtle. (*Caretta caretta*) of the Gulf of Mexico. Paris Arch. Parasitol. **16** 1914 (411–427). **155**

Ransom, B. H. The occurrence in the U. S. of certain Nematodes of ruminants transmissible to man. New Orleans Med. and Surg. J. **69** 1916 (294). **156**

Ransom, B. H. Recent progress in the development of methods for the control and treatment of parasites of live stock. 2nd Pan Amer. Sci. Congr. Jan. **1916** Washington Govt. Printg. Off. 1917 (1–10). **157**

Ransom, B. H. and **Foster,** W. D. Life history of *Ascaris lumbricoides* and related forms. Journ. Agric. Res. **11** 1917 (395–398). **158**

Ransom, B. H. and **Hall,** M. C. A further note on the life-history of *Gonglyonema scutatum*. J. Parasitol. **3** 1917 (177–181). **159**

Richard, A. Les parasiticides. Leçons professées à la faculté de médecine de Paris. Paris Arch. Parasitol. **16** 1913 (5–133). **160**

Riley, W. A. Another case of the occurrence of the Giant Nematode, *Dioctophyme renale*, in the abdominal cavity, and data bearing upon the theory of entry via the genito-urinary tract. Cornell Vet. **7** 1917 (43–45). **161**

Rioja, E. Datos para el conocimiento de la fauna de Anélidos Poliquetos del Cantàbrico. Trabaj. Mus. Nac. Madrid Ser. Zool. No. **29** 1917 (1–111). **162**

Ritzema Bos, J. Het Stengelaaltje (*Tylenchus devastatrix*) en de tegenwoordig in de Bloembollenstreek heerschende aaltjesziekte der Narcissen. I. Wageningen Tijdschr. Plantenziekten **23** 1917 (99–135). **163**

Ritzema Bos, J. Ziekten en beschadigingen veroorzakt door dieren. Wageningen Meded. Hoog. Land-Tuin-Boschbouws. **11** 1917 (169–250). **164**

Robertson, W. A. N. *vide* Sweet, G.

Rohdenburg, G. L. and **Bullock,** F. D. Transplantable sarcomata of the rat liver arising in the walls of parasitic cysts. Journ. Cancer Research Baltimore **1** 1916 (87–94). **165**

Rosa, D. Sulla classificazione dei Vermi. Torino Boll. Mus. Zool. Anat. **31** 1916 No. 708 (1–11). **165a**

Rosen, F. *vide* Janicki, C.

Rosenbusch, F. Beitrag zur Einteilung der Mikrofilarien in Argentinien. Centralbl. Bakt. Jena I Abth. Orig. **78** 1916 (43–45). **166**

Rousselet, C. F. Some further notes on collecting and mounting Rotifera. J. Quek. Micr. Club **13** 1917 (321–327). **167**

Ruiz-Arnau, R. La Lymphectasie Tropicale Primitive. Paris (A. Maoine et Fils) 1916 (1–138). **168**

Ryerson, C. G. S. Notes on the Hirudinea of Georgian Bay. Contr. Canadian Biol. Ottawa **1911-1914** fasc. 2 1915 (165–176). **169**

Saceghem, R. van. Contribution à l'étude de la dermite granuleuse des Equidés. Paris Bull. Soc. Path. exot. **10** 1917 (726). **170**

Schebitz. Distomatose beim Pferd. Berlin Tier. Woch. **33** 1917 (346–347). **171**

Schellhase, —. Vorläufige Mitteilung über das Vorkommen von Trematodenlarven im Wels von Deutsch-Ostafrika. Berlin Tier. Woch. **33** 1917 (69–70). **172**

Schneider, Guido. Quaedam ad cognationem nematodarum Finlandiae liberarum. Rev. Zool. Russe Moscou **2** 1917 (44–45). **173**

Schneider, Johannes. Zur Entwicklung der *Pronosyllis pulligera* Langerhans. Zool. Anz. Leipzig **44** 1914 (621–627). **174**

Schoevers, T. A. C. Proeven met eenige Chemicaliën ter Bestrijding van het Wortelaaltje (*Heterodera radicicola* Greef). Wageningen Meded. Hoog. Land-Tuin-Boschbouws. **12** 1917 (46–48). **175**

Seddon, H. R. *vide* Sweet, G.

Seurat, L. G. Sur les Oxyures des Sauriens du Nord-Africain. Arch. Zool. Exper. **56** 1917 (401–444). **176**

Seurat, L. G. Sur l'évolution du *Maupasina Weissi* Seurat (*Heterakidae*). Paris C. R. Acad. Sci. **164** 1917 (1017–1019). **177**

Seurat, L. G. Physaloptères des reptiles du Nord-Africain. Paris C. R. soc. biol. **80** 1917 (43–52). **178**

Seurat, L. G. Sur une Ascaride de la grenouille. Paris C. R. soc. biol. **80** 1917 (94–97). **179**

Seurat, L. G. Physaloptères des Mammifères du Nord-Africain. Paris C. R. soc. biol. **80** 1917 (210–218). **180**

Seurat. L. G. Sur les affinités du genre *Maupasina* (*Heterakidae*). Paris C. R. soc. biol. **80** 1917 (350–354). **181**

Seurat, L. G. Une nouvelle Filaire péritonéale des Rongeurs. Paris C. R. soc. biol. **80** 1917 (354–357). **182**

Seyfarth, C. Tropische und subtropische Süsswasserblutegel als Parasiten im Menschen. Centralbl. f. Bakt. I. Orig. **79** 1917 (89–96). **183**

Shaw, H. B. Control of the sugar-beet Nematode. Washington D.C. U.S. Dept. Agric. Farm. Bull. **772** 1916 (1–19). **184**

Shimamura, T. and **Fujii,** H. Ueber das Askaron, einen toxischen Bestandteil der Helminthen besonders der Askariden und seine biologischen Wirkung. Tokyo J. Coll. Agric. **3** 1917 (189–258). **185**

Shircore, J. O. Notes on the prevalence of intestinal parasites in East Africa. Trans. Soc. Trop. Med. & Hyg. **10** 1917 (101–108). **186**

Shull, A. F. Inheritance in *Hydatina senta*. 2. Characters of the females and their parthenogenetic eggs. J. Exp. Zool. Philadelphia **18** 1915 (145–186). **187**

Sicard, M. H. Trichinosis, with a report of cases. Med. Rec. New York **86** 1914 (282–285). **188**

Sinton, J. A. A Trematode parasite of Anopheline Mosquitoes. Ind. J. Med. Research **5** 1917 (192–194). **189**

Skrjabin, K. I. *Aprocta microanalis* nov. sp., nouvelle filaire des yeux d'oiseaux. Paris C. R. soc. biol. **80** 1917 (303–306). **190**

Skrjabin, K. I. *Loa extraocularis* nov. sp., parasite nouveau de l'oeil de l'homme. Paris C. R. soc. biol. **80** 1917 (759–762). **191**

Skrjabin, K. I. Sur quelques Nématodes des oiseaux de la Russie. Parasitol. Cambr. **9** 1917 (460–481). **192**

Smith, F. North American earthworms of the family *Lumbricidae* in the collections of the United States National Museum. Proc. U. S. Nat. Mus. **52** 1917 (157–182). **193**

Smith, F. and **Green,** B. R. The Porifera, Oligochaeta and certain other groups of Invertebrates in the vicinity of Douglas Lake, Michigan. Report Michigan Acad. Sci. **17** 1916 (81–84). **194**

Soulier, A. Le cinquième stade de segmentation (trente-deux cellules) chez *Protula meilhaci*. Arch. Zool. Paris (Notes et Rev.) **56** 1917 (100–103). **195**

Stefanski, W. Sur les races de *Trilobus gracilis* Bast. Rev. Suisse Zool. **25** 1917 (163–168). **196**

Stephenson, J. On the so-called pharyngeal gland-cells of Earthworms. Q. J. Microsc. Sci. London **62** 1917 (253–286). **197**

Stephenson, J. Oligochaeta. [In] Fauna of the Chilka Lake. Mem. Ind. Mus. **5** 1917 (483–490). **197a**

Stephenson, J. On a collection of Oligochaeta from various parts of India and further India. Rec. Ind. Mus. **13** 1917 (353–416). **197b**

Stevens, J. W. W. *vide* **Fantham,** H. B.

Stewart, F. H. On the life history of *Ascaris lumbricoides*. Brit. Med. J. **1916** (2) (5 & 474). **198**

Stewart, F. H. Further experiments on Ascaris infection. Brit. Med. J. **1916** (2) 1916 (486). **199**

Stewart, F. H. On the life history of *Ascaris lumbricoides*. Brit. Med. J. London **1916** 1916 (753). **200**

Stewart, F. H. On the development of *Ascaris lumbricoides* Lin. and *Ascaris suilla* Duj. in the rat and mouse. Parasitol. Cambr. **9** 1917 (213–227). **201**

Stringer, C. E. The means of locomotion in Planarians. Washington Proc. Nat. Acad. Sci. **3** 1917 (691–692). **202**

Stuckey, E. J. Circumocular Filariasis. China Med. J. **31** 1917 (24–25). **203**

Stunkard, H. W. On the anatomy and relationships of some North American Trematodes. J. Parasitol. **3** 1916 (21–27). **204**

Sweet, G., **Seddon,** H. R. and **Robertson,** W. A. N. Fluke in sheep. Vict. J. Dept. Agric. **15** 1917 (705–710). **205**

Taliaferro, W. H. *vide* Kepner, W. A.

Taylor, M. Some points in the cytology of the later Spermatogonial and first Meiotic Nuclei of *Fasciola hepatica* (*Distomum hepaticum*). Proc. R. Phys. Soc. Edinb. **20** 1917 (70–77). **206**

Teodoro, G. Sul modo con cui la *Taenia echinococcus* si fissa alla mucosa intestinale. Pathologica **9** 1917 (269–270). **207**

Theobald, F. V. *vide* **Fantham,** H. B.

Travassos, L. Nematodeos parasitos de roedores. Brazil Medico **31** 1917 (35). **208**

Travassos, L. *Tetrameridae* brazileiras (2a Nota previa). Brazil Medico **31** 1917 (65–66). **209**

Travassos, L. Trichostrongylinas brazileiras (5a Nota previa). Brazil Medico **31** 1917 (73). **210**

Travassos, L. Alguns helminthos da collecção do Instituto Bacteriologico de S. Paulo. Brazil Medico **31** 1917 (99–100). **211**

Travassos, L. Helminthos du collecção do Musen Paulista Brazil Medico **31** 1917 (121–122). **212**

Travassos, L. Contribuição para o conhecimento da fauna helminthologica sul-fluminese. Brazil Medico **31** 1917 (149). **213**

Travassos, L. Distinction between *A. brasiliense* Faria and *A. ceylanicum* Looss. Rio de Janeiro Mem. Inst. Oswaldo Cruz **9** 1917 (5). **214**

Travassos, L. Contribuições para o conhecimento da fauna helmintolojica brazileira. VI. Revisão dos acantocefalos brazileiros. Parte I. Fam. *Gigantorhynchidae* Hamann 1892. Rio de Janeiro. Mem. Inst. Oswaldo Cruz **9** 1917 (5–62). **215**

Treadwell, A. L. A new species of polychaetous annelid from Panama, with notes on a Hawaiian form. Proc. U.S. Nat. Mus. **52** 1917 (427–430). **216**

Trimble, C. G. Circumocular Filariasis. China Med. J. **31** 1917 (266). **217**

Tyzzer, E. E. and **Honeij,** J. A. The effects of radiation on the development of *Trichinella spiralis* with respect to its application to the treatment of other parasitic diseases. J. Parasitol. **3** 1916 (43–56). **218**

Urbain, G. *vide* Conreur, C.

Vleming, E. Filariase by paarden in Suriname. [Filariase bei Pferden in Surinam.] Leiden. Tydschr. vergelyk. geneesk. gezondh. dierz. **2** 1917 (180–195). **219**

Walker, E. M. Bibliography of Canadian Zoology – Vermes. Trans. Soc. Canada (3) **11** sect. 4 1916 (201–202). **220**

Wallace, H. S. Eel-worms. The Vasculum Hexham **3** 1917 (48–51). **220a**

Walton, A. C. *Ascaris canis* (Werner) and *Ascaris felis* (Göze). A taxonomic and a cytological comparison. Biol. Bull. Woods Hole Mass. **31** 1916 (364). **221**

Walton, A. C. A case of the occurrence of *Ascaris triquetra* Schrank in dogs. J. Parasitol. **3** 1916 (39–41). **222**

Ward, H. B. Notes on two free-living larval Trematodes from North America. J. Parasitol. **3** 1916 (10–19). **223**

Ward, H. B. On the structure and classification of North American Parasitic Worms. J. Parasitol. **4** 1917 (1–11). **224**

Ward, H. B. and **Magath,** T. B. Notes on some Nematodes from Fresh-water Fishes. J. Parasitol. **3** 1916 (27–64). **225**

Waterman, N. Over Trichostrongylose by de geit. [Trichostrongylose bie der Ziege.] Leiden Tydschr. vergelyk. geneesk. gezondh. dierz. **4** 1918 (48–52). **226**

Weber, R. A. Observations on the structure of double monsters in the earthworm. Biol. Bull. Woods Hole Mass. **33** 1917 (339–354). **226a**

Welch, P. S. Enchytraeidae (Oligochaeta) from the Rocky Mountain region. Trans. Amer. Micr. Soc. **36** 1917 (67–81). **227**

Welch, P. S. Enchytraeidae (Oligochaeta) of the Woods Hole region, Mass. Trans. Amer. Micr. Soc. **36** 1917 (119–138). **228**

Welch, P. S. Snow-field and glacier Oligochaeta from Mt. Rainier, Washington. Trans. Amer. Microsc. Soc. **35** 1916 (85–124). **228a**

Welsford, E. J. Investigation of bulb rot of Narcissus. Ann. Appl. Biol. London **4** (36–46). **229**

Wenyon, C. M. and **O'Connor,** F. W. The carriage of . . . . eggs of parasitic worms by house-flies, with some notes on the resistance of cysts to disinfectants and other agents. J. Roy. Army Med. Corps **28** 1917 (522). **230**

Wester, J. Een nieuwe Strongyloïdes by veulens. [Ein neuer Strongyloïdes bei Füllen.] Utrecht Tydschr. Diergen. **44** 1917 (67–73). **231**

Whitney, D. D. The influence of food in controlling sex in *Hydatina senta*. J. Exp. Zool. Philadelphia **17** 1914 (545–558). **232**

Whitney, D. D. Parthenogensis and sexual reproduction in Rotifers. Experimental Research upon *Brachionus pala*. Amer. Nat. **50** 1916 (50–52). **233**

Whitney, D. D. The Transformation of *Brachionus pala* into *Brachionus amphiceros* by Sodium silicate. Biol. Bull. Woods Hole Mass **31** 1916 (113). **234**

Whitney, D. D. The production of functional and rudimentary spermatozoa in Rotifers. Biol. Bull. Woods Hole Mass. **33** 1917 (305–315). **234a**

Wickware, A. B. Intestinal parasites of poultry, their prevention and treatment. Canada Dept. Agric. Health of Animals Bull. No. **25** 1917 (1–13). **235**

Willetts, D. G. A statistical study of Intestinal Helminthiasis. [Southern Med. Jl. **10** 1917 (42–49).] Abs. in Trop. Dis. Bull. Lond. **9** 1917 p. 276. **236**

Wirth, D. Filariosen bei einheimischen Pferden (Vierte Mitteilung). Zs. Infektkrankh. Haustiere Berlin **18** 1917 (380–413). **237**

Wohl, M. G. Trichiniasis. Med. Rec. New York **89** 1916 (98–101). **238**

Wulzen, R. Some chemiotropic and feeding reactions of *Planaria maculata*. Biol. Bull. Woods Hole Mass. **33** 1917 (67–69). **238a**

Yakimoff, W. L., **Schokhor**—and **Koselkine**—. Microfilaires des animaux au Turkestan russe. Paris Bull. Soc. Path. exot. **10** 1917 (102–105). **239**

Yorke, W. and **Blacklock,** B. The occurrence of *Ankylostoma ceylanicum* in West African dogs. Ann. Trop. Med. & Parasitol. **11** 1917 (69–74). **240**

Yorke, W. and **Blacklock,** B. Observations on the periodicity of *Microfilaria nocturna*. Ann. Trop. Med. & Paras. **11** 1917 (127–147). **241**

Yoshida, S. On a trematode larva encysted in a Crab, *Helice tridens* (de Haan). J. Parasitol. **3** 1916 (76–81). **242**

Yoshida, S. The occurrence of *Bothriocephalus liguloides* Leuckart, with especial reference to its development. J. Parasitol. **3** 1917 (171–176). **243**

Yoshida, S. Some Cestodes from Japanese Selachians, including five new species. Parasitol. Cambr. **9** 1917 (560–592). **244**

Ziegler, H. E. Aus der Entwicklungsgeschichte eines Röhrenwurmes. Zool. Anz. Leipzig **44** 1914 (586–592). **245**

Zuelzer, M. Kurzer Beitrag zur Kenntnis der Jugendstadien von *Bilharzia haematobia* (*Schistosomum haematobium*). Arch. Schiffshyg. Leipzig **21** 1917 (269–274). **246**

PLATYHELMINTHIA, NEMERTINEA, MESOZOA.

SUBJECT INDEX.

COMPREHENSIVE AND GENERAL. 1203

Economics.

RELATION TO DISEASE.

TREMATODA :—

Ando, 4 ; Becker, 14 ; Cawston, 34, 34a and 35 ; Fujinami, 71 ; Hilario & Wharton, 89b ; Potts, 154a.

CESTODA :—

Blanchard, 21 ; Bouttier & Molard, 27 ; Dévé, 54, 55 and 56 ; Evans, 63 ; Hall, 85 ; Richaud, 160 ; Rohdenburg & Bullock, 165 ; Yoshida, 243.

Technique.

Hall, 86.

STRUCTURE. 1207

General Morphology.

TURBELLARIA :—

von Hofsten, 91.

TREMATODA :—

Cort, 49 ; Hilario & Wharton, 89b ; Johnston, 104 ; Pratt, 155.

CESTODA :—

Beddard, 15.

NEMERTINEA :—

Brinkmann, 30.

Genital Organs.

von Hofsten, 91 ; Johnston, 104.

Histology, Cytology.

Kepner & Foshee, 107 ; Kepner & Taliaferro, 107a ; Taylor, 206.

PHYSIOLOGY. 1211

Response to stimuli.

Colgan, 44 ; Kepner & Foshee, 107 ; Stringer, 202 ; Wulzen, 238a.

DEVELOPMENT. 1215

General, Life-Cycle.

TURBELLARIA :—

Ball, 7 ; Child, 37.

TREMATODA :—

Ciurea, 40 ; Faust, 66 ; Iturbe, 99 & 100 ; Iturbe & Gonzalez, 101 ; Leiper, 119 ; Lutz, 126 ; Nakagawa, 143 & 144 ; Narabayashi, 145 ; Zuelzer, 246.

CESTODA :—

Ackert & Grant, 2a ; Dévé, 56 ; Foster, 69a ; Janicki, 102 ; Janicki & Rosen, 103 ; Yoshida, 243.

Larval forms.

TREMATODA :—

Cawston, 34 ; Ward, 223 and 224.

CESTODA :—

Cooper, 48.

ETHOLOGY. 1219

Bionomics.

Moore, 141.

Plankton.

Brinkmann, 30 ; Lebour, 114.

Transmission.

Becker, 14 ; Wenyon & O'Connor, 230.

Parasitism.

TURBELLARIA :—

Kaburaki, 105.

TREMATODA :—

In *Mollusca.*

Cawston, 34 and 35; Faust, 66; Iturbe, 99 and 100; Iturbe & Gonzalez, 101; Leiper, 119; Lutz, 126; Nakagawa, 143; Narabayashi, 145; Zuelzer, 246.

Other Invertebrata.

Lebour, 115; Sinton, 189; Yoshida, 242.

Pisces.

André, 4; Ciurea, 40; Goto & Kikuchi, 79; MacCullum, 128; Schellhase, 172.

Amphibia & Reptilia.

André, 4; Barker & Parsons, 8; Pratt, 155; Stunkard, 204.

Aves.

André, 4; Johnston, 104; Travassos, 213; Ward, 224.

Mammalia (except Man).

Barker, 7b; Boynton & Wharton, 28; Schebitz, 171; Sweet, Seddon & Robertson, 205; Travassos, 213.

Man.

Cawston, 35; Fantham, Stevens & Theobald, 64; Fujinami, 71; Hilario & Wharton, 89b; Lane, 110; Nakagawa, 144; Shircore, 186.

CESTODA :—

In *Invertebrata.*

André, 4; Janicki & Rosen, 103.

Pisces.

Beauchamp, 13; Cooper, 48; Janicki, 102; Linton, 121; MacCullum, 128; Yoshida, 244.

Aves.

André, 4; Cholodkovsky, 39; Fuhrmann, 70; Gutberlet, 83a; Wickware, 235.

Mammalia (except Man).

Ackert & Grant, 2a; Andre, 4; Barthélemy, 11; Galli-Valerio, 72; Hall, 84; Macfie, 129; Teodoro, 207.

Man.

Blanchard, 21; Bouttier & Molard, 27; Dévé, 53, 55 & 56; Fantham, Stevens & Theobald, 64; Guerrini, 82; Hoki, 92; Leon, 120; Shircore, 186.

VARIATION, PHYLOGENY. 1223

Phylogeny, classification.

Rosa, 165a.

Teratology.

Barker, 7a; Foster, 69a; Leon, 120.

DISTRIBUTION. 1227

[*Vide etiam* Ethology (Parasitism).]

Europe.

Nasonov, 146.

America.

Cort, 49.

Mediterranean.

Maluquer, 131.

North Atlantic.

Brinkmann, 30; Ostenfeld, 150.

SYSTEMATIC. 1231

PLATYHELMINTHIA.

(*a*) **Turbellaria.**

Süsswassertricladen, Bestimmungsschlüssel; KABURAKI Annot. Zool. Japan. **9** p. 331.

Castrada list of spp., *perspicua* p. 702 descr., *libidinosa* p. 705 **sp. n.** Swedish Lapland; HOFSTEN Naturw. Unters. Sarekgeb. **4** 6.—*C.* revisn. of genus; HOFSTEN Zool. Bidrag fran Uppsala **5** pp. 1–14.—*C. perspicua* (Fuhrm.) syn. *C. segne* (Luther) p. 1247, *segnis* subsp. *fennica* **subsp. n.** p. 1250; NASONOV Petrogr. Bull. Acad. Sci. **6** No. 15 [Figs. in No. 14]. (Russ.)

Dalyellia lutheri p. 1104, *karisalmica* p. 1106, **spp. n.** Finland; NASONOV Petrogr. Bull. Acad. Sci. **6** No. 14. (Russ.)

Dendrocoelum lacteum geogr. distr.; HOFSTEN Naturw. Unters. Sarekgeb. **4** 6 p. 723.

Ectoplana **gen. n.** for *E.* (*Procerodes*) *limuli* on *Limulus*; KABURAKI Annot. Zool. **9** p. 325.

Mesostoma maculatum **sp. n.** Swedish Lapland; HOFSTEN Naturw. Unters. Sarekgeb. **4** 6 p. 711.

Olistanella valaamica p. 1241, *palmeni* p. 1243, **spp. n.** Finland; NASONOV Petrogr. Bull. Acad. Sci. **6** No. 15 [figs. in No. 14]. (Russ.)

Opistomum arsenii **sp. n.** Finland; NASONOV Petrogr. Bull. Acad. Sci. 6 No. 14 p. 1108. (Russ.)

Otomesostoma auditivum distr.; HOFSEEN Naturw. Unters. Sarekgeb. **4** 6 p. 735.

Planaria alpina geogr. distr.; HOFSTEN Naturw. Unters. Sarekgeb. **4** 6 p. 723.

Polycelis ijimai **sp. n.** Japan; KABURAKI Annot. Zool. Japan **9** p. 327.

(*b*) Trematoda.

List of, parasitic in Australian birds; JOHNSTON Sydney N.S.W. J. R. Soc. **50** p. 252.

Acanthocotyle bothi **sp. n.** from *Bothus maculatus*; MACCULLUM Zoothpathologica N. Y. Zool. Soc. **1** p. 60.

Acanthoparyphium spinulosum **sp. n.** from *Charadrius dominicus*; JOHNSTON Sydney N.S.W. J. R. Soc. **50** p. 198.

Acrolichanus **nom. n.** for *Acrodactyla* Stafford type *A. petalosa* (Lander); WARD J. Parasitol. **4** p. 4.

Alassostoma **gen. n.** (*Paramphistomidae*) *magnum* type sp. from *Pseudemys troosti* and *P. elegans*, *parvum* from *Chelydra serpentina*, **spp. n.**; STUNKARD J. Parasitol. **3** p. 24.

Alcicornis **gen. n.** *carangis* **sp. n.** from *Caranx ruber*; MACCULLUM Zoopathologica N. Y. Zool. Soc. **1** p. 62.

Aorchis extensus B. & P. described; BARKER & PARSONS Trans. Amer. Micr. Soc. **36** p. 57.—*A.* vide *Heronimidae*.

Artyfechinostomum sufrartyfex vide *Echinostomum malayanum*.

Atalostrophion epinepheli **sp. n.** from *Epinephelus striatus*; MACCULLUM Zoopathologica N. Y. Zool. Soc. **1** p. 71.

Athesmia attillae **sp. n.** from *Attila cinerea*; TRAVASSOS Brazil Medico **31** p. 149.

Australbilharzia **gen. n.** p. 234, *terrigalensis* **sp. n.** from *Larus novae-hollandiae*; JOHNSTON Sydney N.S.W. J. R. Soc. **50**.

Azygia distorted specimens wrongly named *Megadistomum*, *Mimodistomum* and *Hassalius*; WARD J. Parasitol. **4** p. 4.

Bilharzia, *Bilharziella* and allied genera, distinctions; JOHNSTON Sydney N.S.W. J. R. Soc. **50** p. 238.

Catoptroides magnum from *Balistes carolinensis* p. 64, *aluterae* from *Alutera schoepfii* p. 66, **spp. n.**; MACCULLUM Zoopathologica N. Y. Zool. Soc **1**.

"*Cercaria*" *pellucida* from *Limnaea proxima* and *Physa gyrina* p. 106, *konadensis* from *L. proxima* p. 108, *ptychocheilus* from *Ptychocheilus oregonensis* p. 110, *flabelliformis* from *P. gyrina* p. 111, *crenata* from *Lymnaea proxima* p. 112, *glandulosa* from *P. gyrina* p. 113, *diaphana* from *L. proxima* p. 114, *dendritica* from *L. proxima* p. 115, *microparynx* from *L. proxima* p. 116, *racemosa* from *L. proxima* p. 117, *trisolenata* from *P. gyrina* and *Planorbis trivolvis* p. 118, *biflexa* from *P. gyrina* p. 119, *gracillima* from *P. gyrina* and *L. proxima* p. 122, *tuberistoma* from *P. gyrina* p. 123, "**spp. n.**"; FAUST J. Parasitol. **3**.—"*C.*" *cortii* from *Planorbis trivolvis* p. 161, *gracilis* from *Physa integra* p. 168, *inversa* from *Physa gyrina* p. 169, *echinocauda* from *P. gyrina* p. 170, *quieta* from *Planorbis trivolvis* p. 171, *haskelli* from *P. gyrina* p. 172, *kansiensis* from *Planorbis trivolvis* p. 174, "**spp. n.**"; O'ROKE Sci. Bull. Kansas Univ. **10**.—"*C.*" *catenata* from *Planorbis pfeifferi* *Limnaea natalensis* and *Physopsis africana* p. 131, *oculata* from *P. africana* p. 132, *secobiana* from *P. africana* p. 133, "**spp. n.**"; CAWSTON Jl. Parasitol. **3**.—"*C.*" *marcianae* from *Thamnophis marciana* p. 3, *vegrandis* from *T. marciana* and *T. eques* p. 8, "**spp. n.**"; LA RUE Occ. Papers Mus. Zool. Michigan **35**.—"*C*" *anchoroides* p. 12, *gorgonocephala* p. 17, "**spp. n.**" free-living N. America; WARD J. Parasitol. **3**.

Cithara **gen. n.** *priacanthi* **sp. n.** from *Priacanthus cruentatus*; MACCULLUM Zoopathologica N. Y. Zool. Soc. **1** p. 70.

Clinostomum australiense **sp. n.** from *Plotus novae-hollandiae*; JOHNSTON Sydney N.S.W. J. R. Soc. **50** p. 230.

Collyriclidae **fam. n.** [?] for *Collyriclum colei* **nom. n.** for *Monostoma faba* Cole; WARD J. Parisitol. **4** p. 2.

Cryptogoniminae **subfam. n.** [?] for *Cryptogonimus* Osborn; WARD J. Parasitol. **4** p. 5.

Cyclocoelum taxorchis **sp. n.** from *Limosa novae-hollandiae*; JOHNSTON Sydney N.S.W. J. R. Soc. **50** p. 239.

Dactylogyrus inversus **sp. n.** on *Lateolabrax japonicus* Cuv. and Val.; GOTO and KIKUCHI Tokyo J. Coll. Sci. **39** 4 p. 1.

Diclidophora prionoti from marine fish p. 47, *cynoscioni* from *Cynoscion regalis* p. 48, *neomaenis* from *Neomaenis analis* p. 49, **spp. n.**; MACCULLUM Zoopathologica. Sci Contrib. N. Y. Zool. Soc. **1**.

Diplectanum tylosuri **sp. n.** from *Tylosurus marinus*; MACCULLUM Zoopathologica N. Y. Zool. Soc. **1** p. 55.

Distoma vide *Fascioloides*.

Dolichosaccus solecarius **sp. n.** from *Phalacrocorax melanoleucus*; JOHNSTON Sydney N.S.W. J. R. Soc. **50** p. 218.

Echinochasmus tenuicollis **sp. n.** from *Phalocrocorax melanoleucus*; JOHNSTON Sydney N.S.W. J. R. Soc. **50** p. 206.

Echinoparyphium oxyurum from *Herodias timoriensis* p. 201, *harveyanum* from *Micraeca fascinans* p. 204, **spp. n.**; JOHNSTON Sydney N.S.W. J. R. Soc. **50**.

Echinostoma vide *Stephanoprora*.

Echinostomum malayanum dist. from *Artyfechinostomum sufrartyfex*; LANE Ind. J. Med. Res. **4** p. 440.

Encotyllabe pagrosomi **sp. n.** from *Pagrosomus auratus*; MACCULLUM Zoopathologica N. Y. Zool. Soc. **1** p. 50.

Fascioloides **gen. n.** [?] type *F.* (*Distoma*) *magna* (Bassi); WARD J. Parasitol. **4** p. 3.

Haematotrephus adelphus **sp. n.** from *Himantopus leucocephalus*; JOHNSTON Sydney N.S.W. J. R. Soc. **50** p. 241.

Harmostomum pulchellum **sp. n.** from *Leucosarcia picata*; JOHNSTON Sydney N.S.W. J. R. Soc. **50** p. 227.

Hassalius Goldberger nom. nud. = *Azygia*; WARD J. Parasitol. **4** p. 4.

Heronimidae **fam. n.** [?] for *Aorchis extensus* Barker and Parsons; WARD J. Parasitol. **4** p. 3.

Himasthla harrisoni **sp. n.** from *Numenius cyanopus*; JOHNSTON Sydney N.S.W. J. R. Soc. **50** p. 195.

Hyptiasmus magnus **sp. n.** from *Chenopsis atrata*; JOHNSTON Sydney N.S.W. J. R. Soc. **50** p. 244.

Levinseniella howensis **sp. n.** from *Charadrius dominicus*; JOHNSTON Sydney N.S.W. J. R. Soc. **50** p. 220.

Loimos **gen. n.** *salpinggoides* **sp. n.** from *Carcharhinus obscurus*; MACCULLUM Zoopathologica N. Y. Zool. Soc. **1** p. 54.

Lyperosomum parvum from *Strepera versicolor* p. 223, *megastomum* from *Sterna bergii* p. 225, *harrisoni* from *Ninox boobook* p. 226, **spp. n.**; JOHNSTON Sydney N.S.W. J. R. Soc. **50**.

Megadistomum Leidy and Stafford nom. nud. = *Azygia*; WARD J. Parasitol. **4** p. 4.

Microcotyle incomparabilis from *Caranx ruber* p. 63, *polynemi* from *Polynemus auratus* p. 68, **spp. n.**; MACCULLUM Zoopathologica N. Y. Zool. Soc. **1**.

Mimodistomum Leidy nom. nud. = *Azygia*; WARD J. Parasitol. **4** p. 4.

Monostomum pandum Braun vide *Wilderia elliptica*.

Nudacotyle **gen. n.** type sp. *novica* **sp. n.** from muskrat; BARKER Trans. Amer. Micr. Soc. **35** p. 181.

Nudacotylinae **sub-fam. n.** (*Nudacotylidae*) type gen. *Nudacotyle* q.v.

Pachypsolus tertius **sp. n.** from *Caretta caretta*; PRATT Arch. Parasitol. **16** p. 416.

Paragonimus westermanni life-cycle; NAKAGAWA J. Exp. Med. **26** p. 297.

Paramphistomum aspidonectes **sp. n.** from *Trionyx aspidonectes ferox*; MACCULLUM Zoopathologica N. Y. Zool. Soc. **1** p. 59.

Patagifer acuminatus from *Ibis molucca* p. 210, *fraternus* from *Herodias timoriensis* p. 213, **spp. n.**; JOHNSTON Sydney N.S.W. J. R. Soc. **50**.

Plagiorchis spatulatus from *Anthus australis* p. 214, *clelandi* from *Petrochelidon ariel* p. 216, **spp. n.**; JOHNSTON Sydney N.S.W. J. R. Soc. **50.**

Plesiochorus cymbiformis (Rud.) descriptn.; PRATT Arch. Parasitol. **16** p. 420.

Pneumobites **gen. n.** [?] for *Pn.* (*Pneumonoeces*) *longiplexus* (Stafford) type, and *Pn. breviplexus*; WARD J. Parasitol. **4** p. 5.

Pneumonoeces vide *Pneumobites.*—*P.* key to spp. p. 237, *P. coloradensis* **sp. n.** from lung *Rana pipiens*; CORT Trans. Amer. Micr. Soc. **34** p. 231.

Polystoma [*Polystomum*] *orbiculare* from *Pseudemys scripta* and *Chrysemys marginata*, *opacum* from *Trionyx ferox* and *Malacoclemmys leseurii*, *megacotyle* from *Chrysemys marginata*, *microcotyle* from *Chrysemys marginata*, **spp. n.**; STUNKARD J. Parasitol. **3** p. 23.

Polystomoides **sub. gen. n.** [?] of *Polystoma* (sic) type *P.* (*Polystomoides*) *coronatum* (Leidy 1888); WARD J. Parasitol. **4** p. 2.

Polystomum vide *Polystomoides.*

Rhytidodes secundus **sp. n.** from *Caretta caretta*; PRATT Arch. Parasitol. **16** p. 423.

Scaphanocephalus australis **sp. n.** from *Haliaetus leucogaster*; JOHNSTON Sydney N.S.W. J. R. Soc. **50** p. 188.

Schistosomum mansoni, lifecycle; ITURBE & GONZÁLEZ Nat. Acad. Med. (Spec. Ed.) 1917 p. 1.

Stephanochasmus robustus **sp. n.** from *Leptocephalus conger*; MACCULLUM Zoopathologica N. Y. Zool. Soc. **1** p. 67.

Stephanoprora gilberti **nom. n.** [?] for *Echinostoma spinulosum* Gilbert nec Rud.; WARD J. Parasitol. **4** p. 4.

Tetrancistrum **gen. n.** (fam. *Gyrodactylidae*) *sigani* **sp. n.** from *Siganus fuscescens* Houttuyn; GOTO & KIKUCHI Tokyo J. Coll. Sci. **39** 4 p. 13.

Wilderia **gen. n.** *elliptica* **sp. n.** (? = *Monostomum pandum* Braun) from *Caretta caretta*; PRATT Arch. Parasitol. **16** p. 412.

Zygocotyle **gen. n.** (*Paramphistomidae*) for *ceratosa* **sp. n.** type sp. from *Anas platyrhynchos* and *Z.* (*Amphistoma*) *lunatum* (Diesing); STUNKARD J. Parasitol. **3** p. 26.

Zygocotylinae **sub-fam. n.** [?] for *Zygocotyle ceratosa* Stunkard; WARD J. Parasitol. **4** p. 3.

(c) Cestoda.

Acanthobothrium ijimai **sp. n.** from *Dasybatis akaei*; YOSHIDA Parasitol. **9** p. **573.**

Anthobothrium lilliiformis **sp. n.** from *Dasybatis pastinacus*; MACCULLUM Zoopathologica N.Y. Zool. Soc. **1** p. 61.

Bothriocephlaus taenioides really a misshapen *B. latus*; LEON Centralbl. Bakt., Jena, **78**, p. 503.

Calliobothrium convolutum p. 578, *nodosum* p. 585, **spp. n.** from *Cynias manazo*; YOSHIDA Parasitol. **9.**

Choanotaenia infundibuliformis adult & larva described; GUTBERLET Trans. Amer. Micr. Soc. **35** p. 24.

Davainea formosana **sp. n.** from man; AKASHI Taiwan Ig. Zassi **167** 1916—*D. tetragona* p. 34, *cesticillus* p. 37, described; GUTBERLET Trans. Amer. Micr. Soc. **35** p. 34.

Dioicocestus novae guinae **sp. n.** from *Podicipes novae hollandiae*; FUHRMANN Zool. Anz. **44** p. 611.

Duthiersia expansa Perrier and *D. fimbriata* Diesing, structure and distinction; BEDDARD Proc. Zool. Soc. **1917** p. 73.

Hymenolepis carioca description; GUTBERLET Trans. Amer. Soc. **35** p. 39.

Ichthyotaenia vide *Proteocephalus.*

Onchobothrium tortum **sp. n.** from *Aetobatis narinari*; LINTON J. Parasitol. **3** p. 36.

Orygmatobothrium velamentum **sp. n.** from *Cynias manazo*; YOSHIDA Parasitol. **9** p. 566.

Proteocephalus sulcatus syn. *Ichthyotaenia sulcata* Klaptocz; BEAUCHAMP Rev. Zool. Afric. **4** p. 109.

Rhynchobothrium microbothrium **sp. n.** from *Neomaenis analis*; MACCULLUM Zoopathologica N.Y. Zool. Soc. **1** p. 74.—*R. laciniatum* **sp. n.** from *Cynias manazo*; YOSHIDA Parasitol. **9** p. 588.

Taenia narinari **sp. n.** from *Aetobatis narinari*; MACCULLUM Zoopathologica N. Y. Zool. Soc. **1** p. 53.

Tetrarhynchus narinari **sp. n.** from *Aetobatis narinari*; MACCULLUM Zoopathologica N. Y. Zool. Soc. **1** p. 52.

Tylocephalum marsupium **sp. n.** from *Aetobatis narinari*; LINTON J. Parasitol. **3** p. 34.

NEMERTINEA.

Nemertinen, pelagische, monographisch dargestellt; BRINKMANN Bergens Mus. Skr. **3** pp. 1–194.

Balaenanemertes musculocaudata p. 124, *grandis* p. 134, **spp. n.** N. Atlantic; BRINKMANN Bergens Mus. Skr. **3**.

Parabalaenanemertes **gen. n.** *fusca* **sp. n.** N. Atlantic; BRINKMANN Bergens Mus. Skr. **3** p. 118.

Probalaenanemertes **gen. n.** *wijnhoffi* **sp. n.** N. Atlantic; BRINKMANN Bergens Mus. Skr. **3** p. 122.

MESOZOA

[Vacant.]

NEMATHELMINTHIA.

SUBJECT INDEX.

COMPREHENSIVE AND GENERAL. 1403

Economics.

RELATION TO DISEASE.

Borini, 25; Clapier, 41; Cobb, 42; Conreur & Urbain, 47; Dévé, 53; Dickensen, 57; Douma, 60; Dubois, 61; Garcia, 73; Guerrini, 83; Hall, 85; Lane, 112; Lintz, 122; Marotte & Morvan, 132; Ransom, 157; Ransom & Foster, 158; Richaud, 160; Shaw, 184; Shimamura & Fujii, 185; Sicard, 188; Skrjabin, 191; Tyzzer & Honeij, 218; Waterman, 226; Wohl, 238.

Technique.

Baermann, 6; Magath, 130a.

STRUCTURE. 1407

General.

Cobb, 43; Man, 131a; Ward, 224; Wirth, 237.

PHYSIOLOGY. 1411

Effects of chemical reagents.

Nicoll, 147; Painter, 152; Schoevers, 175; Tyzzer & Honeij, 218.

DEVELOPMENT. 1415

General, Life-Cycle.

Nicoll, 147; Painter, 152; Ransom & Hall, 159; Seurat, 177; Stewart, 198, 199, 200 & 201.

ETHOLOGY. 1419

Bionomics.

Commes, 45; Man, 131a.

Transmission: Mode of Infection.

Ackert, 2; Dickinson & Hill, 58 Lyon, 127; Riley, 161; Wenyon & O'Connor, 230.

Parasitism. (*Vide etiam* Relation to disease.)

In *plants.*

Capus, 32; Ritzema Bos, 163 & 164; Schoevers, 175; Wallace, 220a; Welsford, 229.

In *Invertebrata.*

Beauchamp, 13; Davis, 50; Keilin, 106; Lebour, 115; Merrill & Ford, 135; Ransom & Hall, 159; Travassos, 215.

Pisces.

André, 4 & 5; Ward & Magath, 225.

Amphibia.

André, 4 & 5; Gedoelst, 74a; Travassos, 210; Yakimoff, &c., 239.

Reptilia.

Gedoelst, 74a; Plimmer, 154; Seurat, 176 & 178; Travassos, 210 & 215.

Aves.

Ackert, 2; André, 5; Cleave, 41a & 41b; Gedoelst, 74a; Leger, 116; Plimmer, 154; Skrjabin, 190 & 192; Travassos, 208, 209, 211, 213 & 215; Wickware, 235.

Mammalia (*except Man*).

Barthélemy, 11; Boulenger, 26; Boynton & Wharton, 28; Carini & Maciel, 33; Commes & Devaneile, 46; Conreur & Urbain, 47; Dickenson, 57; Douma, 60; Galli-Valerio, 72; Gedoelst, 74a & 75; Hall, 84; Houghton, 95; Lane, 111; Leger & Mouzels, 117; Macfie, 129; Plimmer, 154; Ransom, 156; Saceghem, 170; Seurat, 180, 181, & 182; Shimamura & Fujii, 185; Stewart, 198, 199, 200 & 201; Stuckey, 203; Travassos, 208, 209, 212, 213 & 215; Trimble, 217; Vleming, 219; Walton, 222; Wirth, 237; Yakimoff, &c., 239; Yorke & Blacklock, 240.

Man.

Biglieri & Araoz, 20; Brémont & Leger, 29; Clapier, 41; Dévé 53; Dubois, 61; Fantham, Stevens & Theobald, 64; Glines, 78; Guerrini, 82; La Cava, 108; Montel, 138; Nicoll, 147; Ransom, 156; Rosenbusch, 166; Ruiz-Arnau, 168; Shircore, 186; Skrjabin, 191; Willetts, 236; Yorke & Blacklock, 241.

VARIATION, PHYLOGENY. 1423

[*Vacant*]

DISTRIBUTION. 1427

(*Vide etiam* Parasitism)

Europe.

Man, 131a; Hofsten, 90; Ihle, 96 & 97; La Cava, 108; Wester, 231.

Africa.

Seurat, 176.

America.

Rosenbusch, 166.

SYSTEMATIC. 1431

NEMATHELMINTHIA.

(*a*) Nematoda.

Agchylostoma brasiliense Faria & *A. ceylanicum* Looss; FARIA Mem. Inst. Oswaldo Cruz **8** 1916 p. 71 and TRAVASSOS loc cit. **9** p. 5.

Aprocta microanalis **sp. n.** from *Erithacus* sp.; SKRJABIN C. R. soc. biol. **80** p. 303.

Aproctonema **gen. n.** *entomophagum* **sp. n.** from *Sciara pullala* larva; KEILIN C. R. Acad. Sci. Paris **165** p. 399.

Ascaris canis (Werner) and *A. felis* (Göze) compared; WALTON Biol. Bull. Woods Hole **31** p. 364.—*A. triquetra* Schrank in dog, distinguished from *A. canis* Werner; WALTON J. Parasitol. **3** p. 39.—*A. phacochoeri* from *Phacochoerus africanus* p. 3, *naiae* from *Naia nigricollis* p. 3, *intorta* from *Bitis* sp. p. 4, *hexametra* from *Chamaeleon dilepis* p. 9, *nigra* from Crocodile p. 19, *involuta* from *Chamaeleon dilepis* p. 21, *bufonis* from toad p. 22, *siluricola* from Silurid p. 23, **spp. n.**; Gedoelst Rev. Zool. Africaine **5.**

Bunostomum kashinathii **sp. n.** from sheep; LANE Ind. J. Med. Res. **4** p. 414.

Bustomum **gen. n.** for *B.* (*Bunostomum*) *phlebotomum* type sp; LANE Ind. J. Med. Res. **4** p. 414.

Camallanus ancylodirus from int. of German carp p. 58, *oxycephalus* from int. of white bass and black crappie, p. 59, **spp. n.**; WARD & MAGATH J. Parasitol. **3.**

Capillaria (*Thominx*) *dubia* **sp. n.** from *Attila cinerea*; TRAVASSOS Brazil Medico **31** p. 149.

Chromadorissa **gen. n.** *beklemishevi* **sp. n.** Caspian Sea; FIIPJEV Rev. Zool. Russe **2** p. 29.

Cruzidae **fam. n.** for *Cruzia* **gen. n.** type *C.* (*Oxysoma*) *tentaculata* (Schn.); TRAVASSOS Brazil Medico **31** p. 100.

Cucullanus clitellarius **sp. n.** from int. of *Acipenser rubicundus*; WARD & MAGATH J. Parasitol. **3** p. 59.

Cylichnostomum euproctus p. 204, *insigne* p. 207, *goldi* p. 210, **spp. n.** from horse; BOULENGER Parasitol. **9.**

Dacnitoides **gen. n.** (*Cucullanidae*) *cotylophora* **sp. n.** from int. of *Perca flavescens* and *Stizostedion vitreum*; WARD & MAGATH J. Parasitol. **3** p. 60.

Diplogaster labiata from *Saperda tridentata*, *aerivora* from *Leucotermes lucifugus*, **spp. n.**; MERRILL & FORD J. Agric. Res. **6** p. 115.

Diplotriaena bargusinica **sp. n.** from *Turdus* sp.; SKRJABIN Parasitol. **9** p. 471.

Diplotriaeninae **subfam. n.** for gen. *Diplotriaena* and *Contortospiculum*; IBID Tom. cit. p. 471.

Dorylaimus consobrinus **sp. n.** Holland; DE MAN Tijds. Ned. Dierk. Ver. **16** p. 116.

Echinuria leptoptili **sp. n.** from *Leptoptilus crumenifer*; GEDOELST Rev. Zool. Afric. **5** p. 52.

Enterobius vermicularis syn. *Oxyuris v.*; HASSALL Science N.Y. **44** p. 64.

Evansia apiensis **sp. n.** from *Elephas*; GEDOELST Rev. Zool. Afric. **5** p. 62.

Filaria tucumana (sic) **sp. n.** [?] in man in Argentine; BIGLIERI & ARAOZ (vide Titles) p. 1. *F. duboisi* **sp. n.** from toad and frog; GEDOELST Rev. Zool. **5** p. 46.—*F. bancrofti* transmitted by *Culex quinquefasciatus*; LYON J. Amer. Med. Assoc. **68** p. 118.—*F. numidica* **sp. n.** from *Lepus pallidior* and *L. kabylicus*; SEURAT C. R. soc. biol. **80** p. 354.—*F. palpebralis* in man; STUCKEY China Med. J. **31** p. 24.—*F.* vide *Microfilaria*.

Grammophora **gen. n.** (sub-fam. *Onchocercinae*) *katangensis* **sp. n.** from *Petrodromus tetradactylus*; GEDOELST Rev. Zool. Afric. **5** p. 49.

Habronema seurati **sp. n.** from *Falco cenchris*; SKRJABIN Parasitol. **9** p. 463.

Haplonema **gen. n.** (*Spiruridae*?) *immutatum* **sp. n.** from int. of *Amia calva*; WARD & MAGATH J. Parasitol. **3** p. 61.

Heligmosomum cristatum **sp. n.** from *Sciurus prevosti*; GEDOELST Rev. Zool. Afric. **5** p. 160.

Heligmostrongylus **gen. n.** type *H.* (*Strongylus*) *sedecimradiatus* (Linstow); TRAVASSOS Brazil Medico **31** p. 35.

Heterakis acuticeps from *Chamaeleon gracilis* and *C. dilepis*, *brodeni* from *Chamaeleon* sp. ? p. 39, **spp. n.**; GEDOELST Rev. Zool. Afric. **5**.

Hoplolaimus spp. table and distinctions; MENZEL Rev. Suisse Zool. **25** p. 155.

Hysterothylacium **gen. n.** (*Heterocheilidae*) *brachyurum* **sp. n.** from stomach of black bass; WARD & MAGATH J. Parasitol. **3** p. 63.

Ichthyonema cylindraceum **sp. n.** from abd. cav. of *Perca flavescens*; WARD & MAGATH J. Parasitol. **3** p. 63.

Kathleena arcuata from bird p. 11, *tricuspis* from Heron p. 13, *rodhaini* from *Plotus rufus* p. 15, *punctata* from *Pseudotantulus ibis*? p. 16, **spp. n.**; GEDOELST Rev. Zool. Africaine **5**.

Labiduris africana **sp. n.** from *Cinixys erosa*; GEDOELST T. c. p. 27.

Loa extraocularis **sp. n.** from man; SKRJABIN C. R. soc. biol. **80** p. 759.

Maupasina weissi syn. *Maupasiella w.* description; SEURAT C. R. soc. biol. **80** p. 350.—*M., weissi* development; SEURAT C. R. Acad. Sci. **164** p. 1017.

Microfilaria papillosa embryonic stage of *Filaria papillosa*; WIRTH Zs. Infektkrankh. Haustiere **18** p. 380.

Necator congolensis **sp. n.** from Chimpanzee; GEDOELST Rev. Zool. Afric. **5** p. 65.

Oswaldocruzia **gen. n.** for (1) *O. subauricularis* (Rud.) type, (2) *filiformis* (Goeze) = *Strongylus auricularis* Zeder, (3) *denudata* (Rud.), (4) *dispar* (Duj.), (5) *bialata* (Molin), (6) *subventricosa* (Schn.), (7) *leidyi* **nom. n.** for *Strongylus auricularis* Leidy nec Zeder; TRAVASSOS Brazil Med. **31** p. 73.

Oxynema Linstow validity spp. discussed; BARRETO Brazil Medico. **31** p. 305.

Oxyuris anthropopitheci from Chimpanzee p. 24, *bipapillata* from ape p. 25, **spp. n.**; GEDOELST Rev. Zool. Afric. **5**.—*O.* vide *Enterobius*, *Pharyngodon* and *Thelandros*.

Pharyngodon auziensis **sp. n.** from *Tarentola mauritanica* and *Gongylus ocellatus* p. 406, *laevicauda* **nom. n.** for *P.* (*Oxyuris*) *laevicauda* (Seurat) p. 409; SEURAT Arch. Zool. Paris **56**.

Physaloptera chamaeleontis from *Chamaeleon gracilis* p. 53, *affinis* from *Psammophis sibilans* p. 55, *nasilionis* from *Nasilio brachyrhynchus* p. 57, **spp. n.**; GEDOELST Rev. Zool. Afric. **5**.—*P. pallaryi* **sp. n.** from *Agama bironi* p. 45, *P. leptosoma* (Gervais) syn. *Strongylus l.* Gervais description p. 48; SEURAT C. R. soc. biol. **80**.—*P. brevivaginata* from *Vespertilio kuchli* p. 210, *tacapensis* from *Ctenodactylus gundi* p. 214, *getula* from *Mus rattus* p. 215, *numidica* from *Dipodillus campestris* p. 217, **spp. n.**; SEURAT T. c.

Porrocaecum numidicum **sp. n.** from *Rana ridibunda*; SEURAT T. c. p. 94.

Protospirura muricola **sp. n.** from rat; GEDOELST Rev. Zool. Afric. **5** p. 57.

Pseudoheterakidae **fam. n.** for *Pseudoheterakis* **gen. n.** type *P.* (*Oxysoma*) *lepturum* (Schn.); TRAVASSOS Brazil Medico **31** p. 100.

Spinectetus gracilis **sp. n.** from black crappie, sheepshead and white bass; WARD & MAGATH J. Parasitol. **3** p. 61.

Strongyloides westeri **sp. n.** bei Füllen; WESTER Tyds. diergen. Utrecht **44** p. 71.

Strongyluris icosiensis **sp. n.** from *Gongylus ocellatus*; SEURAT Arch. Zool. Paris **56** p. 436.

Strongylus leptosoma vide *Physaloptera*.—*S. spirillum* **sp. n.** from *Mus decumanus* (?); TRAVASSOS Brazil Medico **31** p. 100.

Subulura pigmentata **sp. n.** from *Sciurus prevosti*; GEDOELST Rev. Zool. Africaine **5** p. 154.—*S. seurati* **sp. n.** from *Cariama cristata*; BARRETO Brazil Medico **31** p. 243.

Tetrameres tetrica from *Aramides cajanea*, *dubia* from *Cancroma cochlearia*, **spp. n.**; TRAVASSOS Brazil Medico **31** p. 65.

Thelandros micipsae **nom. n.** for *T.* (*Oxyuris*) *brevicaudata* (Dujardin); SEURAT Arch Zool. Paris **56** p. 422.

Trichuris carlieri **sp. n.** from *Cricetomys gambianus* ?; GEDOELST Rev. Zool. Afric. **5** p. 72.—*T. megaloon* **sp. n.** from *Sciurus prevosti*; GEDOELST T.c. p. 157.

Trilobus gracilis "races" or varr.; STEFANSKI Rev. Suisse Zool. **25** p. 163.—*T. medius* **sp. n.** Finland; SCHNEIDER Rev. Zool. Russe **2** p. 44.

Tylenchus penetrans descriptn. as sp. n.? from plant roots; COBB Journ. Agric. Res. **11** 1917 p. 32.

(*b*) Nematomorpha.

Chordodes madagascariensis syn. *Gordius madagascariensis* Camer.; BEAUCHAMP Rev. Zool. Afric. **4** p. 111.

Gordius vide *Chordodes*.

(*c*) Acanthocephala.

Centrorhynchidae **fam. n.** for genn. *Centrorhynchus* and *Mediorhynchus* gen. n.; CLEAVE Trans. Amer. Micr. Soc. **35** p. 228.

Centrorhynchus spinosus **sp. n.** from *Herodias* (*Ardetta*) *egretta*; CLEAVE T.c. p. 223.

Fillicollis botulus **sp. n.** from *Somateria dresseri*; CLEAVE T.c. p. 132.

Gigantorhynchidae revised, list of genera, species, synonymy and hosts; TRAVASSOS Mem. Inst. Oswaldo Cruz **9** pp. 5–62.

Mediorhynchus **gen. n.** p. 224, *papillosus* from *Myiochanes* (*Contopus*) *virens* p. 225, *grandis* from *Quiscalus quiscula* p. 226, *robustus* from *Icteria virens* p. 227, **spp. n.**; CLEAVE Trans. Amer. Micr. Soc. **35**.

Micracanthorhynchus **gen. n.** for type sp. *emberizae* (Rud.) intest. of birds; TRAVASSOS Mem. Inst. Oswaldo Cruz **9** p. 60.

Neoechinorhynchidae **fam. n.** [?] type genus *Neoechinorhynchus* Stiles & Hassall; WARD J. Parasitol. **4** p. 10. *Neoechinorhynchus* vide *Tanaorhamphus*.

Pardalis **gen. n.** for *P. pardalis* (Westr.) (*Gigantorhynchidae*); TRAVASSOS Brazil Medico **31** p. 121.

Tanaorhamphus **gen. n.** [?] type *T.* (*Neoechinorhynchus*) *longirostris* (Van Cleave); WARD J. Parasitol. **4** p. 11.

CHAETOGNATHA, GASTROTRICHA, ROTIFERA.

SUBJECT INDEX.

COMPREHENSIVE AND GENERAL. **1603**

Technique.

Bryce, 31; Rousselet, 167.

STRUCTURE. 1607

General.

Germain & Joubin, 76; Hickernell, 89a; Lones, 124 & 125.

Cytology.

Hickernell, 89a; Whitney, 234a.

PHYSIOLOGY. 1611

Environmental Effects.

Hickernell, 89a; Whitney, 232 & 234.

DEVELOPMENT. 1615

Reproduction.

Whitney, 233.

Spermatogenesis.

Whitney, 234a.

ETHOLOGY. 1619

Bionomics.

Hopkinson, 93; Lones, 124 & 125.

Plankton.

Bigelow, 19; Olofsson, 149a.

Parasitism.

Ikeda, 98; Lebour, 115.

VARIATION, PHYLOGENY. 1623

Heredity.

Shull, 187.

Classification, Phylogeny.

Rosa, 165a.

DISTRIBUTION. 1627

Europe and North Sea.

Carr, 33a; Lones, 124 & 125; Olofsson, 149a; Ostenfeld, 150.

North Atlantic.

Ostenfeld, 150.

America.

Myers, 142.

SYSTEMATIC. 1631

(*a*) **Chaetognatha.**

Chaetognatha, general account; GERMAIN & JOUBIN Res. Comp. Sci. Monaco **49** pp. 1–118.

(*b*) **Gastrotricha.**

Chaetonotus polyspinosus p. 50, *insigniformis* p. 52, *cordiformis* p. 54, *rotundus* p. 55, *mitraformis* p. 57, *gracilis* p. 58, *novenarius* p. 58, *voigti* p. 59, *disiunctus* p. 60, *quintospinosus* p. 61, *macrolepidotus* p. 62, *bisacer* p. 64, **spp. n.** Schweiz, *C. nodicaudus* var. *comatus* p. 53, *cordiformis* var. *bernensis* p. 55, **varr. n.** Schweiz; GREUTER Rev. Suisse Zool. **25.**

Dasydytes crassus p. 67, *longispinosus* p. 68, **spp. n.** Schweiz; GREUTER T.c.

Ichthydium maximum **sp. n.** Schweiz; GREUTER T.c. p. 47.

Lepidoderma punctatum **sp. n.** Schweiz; GREUTER T.c. p. 49.

Setopus iunctus **sp. n.** Schweiz; GREUTER T.c. p. 66.

Stylochaeta longispinosa **sp. n.** Schweiz; GREUTER T.c. p. 69.

(*c*) **Rotifera.**

Brachionus amphiceros and *B. pala* transformed; WHITNEY Biol. Bull. Woods Hole **31** p. 113.

Catyphna levistyla p. 280, *intrasinuata* p. 281, **spp. n.** Murman-Küste; OLOFSSON Zool. Bidr. Uppsala **5.**

Lecane aspasia **sp. n.** California; MYERS Proc. U.S. Nat. Mus. **52** p. 476.

Philodina roseola anatomy; HICKERNELL Biol. Bull. Woods Hole **32** p. 350.

ANNELIDA, GEPHYREA, PHORONIDEA, PTEROBRANCHIATA.

SUBJECT INDEX.

COMPREHENSIVE AND GENERAL. 1803

Bibliography.

Walker, 220.

STRUCTURE. 1807

General Anatomy.

POLYCHAETA.

Bergstrom, 18; Borg, 24; Ditlevsen, 59; Hessle, 89; Horst, 94; Livanoff, 123.

HIRUDINEA.

Blanchard, 22; Oka, 149; Ryerson, 169.

PHORONIDEA.

Harmer, 87.

Muscular System.

Charrier, 36; M'Intosh, 130.

Genital Organs.

Bonnet, 23; Stephenson, 197a.

Histology, Cytology.

Abbott, 1; Fauvel, 67; Harvey, 88; Leigh-Sharpe, 118; Stephenson, 197.

PHYSIOLOGY. 1811

Respiration.

Abbott, 1.

Digestion.

Stephenson, 197.

Environmental Effects. Response to Stimuli.

Child, 38; Garrey & Moore, 74; Moore & Kellogg, 140; Welch, 228.

DEVELOPMENT. 1815

Asexual Reproduction.

Beauchamp, 12.

Development.

ARCHIANNELIDA.

Beauchamp, 12.

POLYCHAETA.

Charrier, 36; Child, 38; Mesnil & Caullery, 137; Schneider, 174; Soulier, 195; Ziegler, 245.

PTEROBRANCHIATA.

Gilchrist, 77.

Larval development.

Meek, 133.

ETHOLOGY. 1819

Bionomics.

Greuter, 81; Welch, 228a.

Plankton.

Lebour, 114.

Symbiosis.

Gravier, 80; Monticelli, 139.

Parasitism.

Delanoe, 51; Mesnil & Caullery, 136; Seyfurth, 183.

VARIATION, PHYLOGENY. 1823

Classification, Phylogeny.

Fauvel, 67; Hessle, 89; Rosa, 165a; Stephenson, 197b.

Variation.

Bonnet, 23.

Dimorphism.

Mesnil & Caullery, 137.

Teratology.

Weber, 226a.

DISTRIBUTION. 1827

1. Recent.

General.

Benham, 17; Germain & Joubin, 76; Hessle, 89.

Europe.

Borg, 24; Carr, 33a; Dequal, 51a Greuter, 81; Rioja, 162.

Asia.

Horst, 94; Stephenson, 197a & 197b.

Africa.

Horst, 94b.

America.

Dequal, 52 & 52a; Ryerson, 169; Smith, 193; Smith & Green, 194; Welch, 227, 228 & 228a.

Australia.

Fauvel, 67.

North Atlantic.

Ditlevsen, 59; Ostenfeld, 150.

South Pacific.

Benham, 16 & 17.

2. Fossil.

Upper Silurian.

Etheridge, 62.

Ordovician.

Foerste, 69.

SYSTEMATIC. 1831

1. ANNELIDA.

(*a*) Archiannelida.

Dinophilus, sexuality and development; BEAUCHAMP C. R. Acad. Sci. **164** pp. 56–58.

(*b*) Polychaeta.

Amphicteis gunneri var. *antarctica* **var. n.** Süd Georgien; HESSLE Zool. Bidr. Uppsala **5** p. 116.

Amphisamytha **gen. n.** (*Ampharetidae*) *japonica* **sp. n.** Japan; HESSLE T.c. p. 114.

Amphitrite oculata **sp. n.** Japan; HESSLE T.c. p. 186.

Aphrodite roulei **sp. n.** from N. Atlantic; HORST Leiden Zool. Meded. **3** p. 261.

Aphrogenia villosa var. *laevis* **var. n.** E. Indies; HORST Siboga Exp. **24** 1b p. 64.

Asychis victoriae **sp. n.** S. Pacific (= *Praxilla abyssorum* M'Intosh?); BENHAM Rept. on Polych. Fisheries Austral. **4** pt. 2 p. 151.

Austrolaenilla **gen. n.** *antarctica* **sp. n.** S. Georgia; BERGSTROM Zool. Bidr. fr. Uppsala **4** p. 291.

Barrukia **gen. n.** for *B.* (*Gattyana*) *cristata* (Willey); BERGSTROM Zool. Bidr. fr. Uppsala **4** p. 297.

Bathynoe **gen. n.** p. 42, *nodulosus* **sp. n.** p. 42 N. Atlantic; DITLEVSEN Dan. Ingolf Exped. **4** pt. 4.

Bhawania amboinensis **sp. n.** E. Indies; HORST Siboga Exped. **24** 1b p. 138.

Branchiomma linaresi **sp. n.** Santander; RIOJA Trab. Mus. Nac. Madrid **29** p. 66.

Cheilonereis **gen. n.** type *C.* (*Nereis*) *cyclurus* (Harrington), *peristomialis* **sp. n.** New Zealand; BENHAM Rept. on Polychaeta Fisheries Austral. **4** pts. 2 & 3 p. 138.

Drieschia melanostoma **sp. n.** N. Atlantic; DITLEVSEN Dan. Ingolf Exped. **4** pt. 4 p. 44.

Eulalia tjalfiensis p. 54, *minuta* p. 56, **spp. n.** N. Atlantic; DITLEVSEN Dan. Ingolf. Exped. **4** pt. 4.

Eunice synonymy of spp.; FAUVEL Arch. Zool. Paris **56** p. 209.

Gorekia **gen. n.** for *G.* (*Malmgrenia*) *crassicirris* (Willey); BERGSTROM Zool. Bidr. fr. Uppsala **4** p. 295.

Halodora sp.?; BENHAM Rept. Polych. Fisheries Austral. **3** pt. 4 p. 207.

Halosydua pilosa p. 81, *batheia* p. 82, **spp. n.** E. Indies; HORST Siboga Exp. **24** 1b.

Harmothoe (*Eunoa*) *etheridgei* **sp. n.** S. Pacific; BENHAM Rept. Polych. Fisheries Austral. **3** pt. 4 p. 197.—*H. brevipalpa* Tierra del Fuego p. 277, *anderssoni* S. Georgia p. 286, **spp. n.**; BERGSTROM Zool. Bidr. fr. Uppsala **4**.—*H. bathydomus* p. 25, *ingolfiana* p. 32, *vesiculosa* p. 34, **spp. n.** N. Atlantic; DITLEVSEN Dan. Ingolf Exp. **4** pt. 4.

Laetmonice viridescens **sp. n.** E. Indies; HORST Siboga Exp. **24** 1b p. 58.

Lanicides **gen. n.** (*Terebellidae*) type sp. *L.* (*Terebella*) *vayssieri* (Gravier); HESSLE Zool. Bidr. Uppsala **5** p. 166.

Leaena collaris **sp. n.** Süd Georgien; HESSLE T.c. p. 198.

Leanira sibogae p. 115, *tentaculata* p. 117, *javanica* p. 117, *vulturis* p. 118, *melanocephala* p. 119, *coeca* p. 120, **spp. n.** E. Indies; HORST T.c.

Leodice dubia=*Eunice dubia* Woodw. =*E. siciliensis* Treadw., described; TREADWELL Proc. U.S. Nat. Mus. **52** p. 427.

Lepidasthenia affinis **sp. n.** E. Indies; HORST Siboga Exped. **24** 1b p. 85.

Lepidonotus hedleyi p. 181, *willeyi* p. 183, **spp. n.** S. Pacific; BENHAM Rept. Polych. Fisheries Austral. **3** pt. 4.—*L. javanicus* p. 72, *ruber* p. 73, *suluensis* p. 74, *vandersandei* p. 139, **spp. n.** E. Indies; HORST Siboga Exp. **24** 1b.

Lumbriconereis gulielmi **sp. n.** S. Pacific; BENHAM Rept. Polych. Fisheries Austral. **3** pt. 4 p. 227.

Lysarete australiensis **sp. n.** S. Pacific; BENHAM Rept. Polych. Fisheries Austral. **3** pt. 4 p. 235.

Lysippides **gen. n.** (*Ampharetidae*) type sp. *L.* (*Amphicteis*) *fragilis* (Wollebaek); HESSLE Zool. Bidr. Uppsala **5** p. 110.

Melinna uruguayi **sp. n.** Uruguay; HESSLE T.c. p. 93.

Mystides occidentalis **sp. n.** Davis Strait; DITLEVSEN Dan. Ingolf Exped. **4** pt. 4 p. 62.

Neoamphitrite **gen. n.** (*Terebellidae*) type sp. *N.* (*Amphitrite*) *affinis* (Mgn.); HESSLE Zool. Bidr. Uppsala **5** p. 178.

Neoleprea **gen. n.** (*Terebellidae*) type sp. *N.* (*Leprea*) *streptochaeta* (Ehlers), *japonica* **sp. n.** Japan; HESSLE T.c. p. 192.

Neosabellides **gen. n.** (*Ampharetidae*) type sp. *N.* (*Sabellides*) *elongatus* (Ehlers); HESSLE T.c. p. 103.

Notomastus eisigi **sp. n.** S. Pacific; BENHAM Rept. on Polych. Fisheries Austral. **4** pt. 2 p. 148.

Octobranchus japonicus **sp. n.** Japan; HESSLE Zool. Bidr. Uppsala **5** p. 134.

Oenone haswelli **sp. n.** S. Pacific; BENHAM Rept. Polych. Fisheries Austral. **3** pt. 4 p. 230.

Ophelia dannevigi **sp. n.** S. Pacific; BENHAM Rept. on Polych. Fisheries Austral. **4** pt. 2 p. 150.—*O. ashworthi* **sp. n.** Australia; FAUVEL Arch. Zool. Paris **56** p. 260.

Oridia **nom. n.** for *Oria* Quatrefages; RIOJA Trab. Mus. Nac. Madrid **29** p. 73.

Otopsidae **fam. n.** for *Otopsis* **gen. n.** *longipes* **sp. n.** N. Atlantic; DITLEVSEN Dan. Ingolf. Exped. **4** pt. 4 p. 67.

Owenidae **nom. n.** for fam. type gen. *Owenia*; RIOJA Trab. Mus. Nac. Madrid Zool. **29** p. 40.

Pectinaria ehlersi Feuerland p. 77, *bocki* Japan p. 81, **spp. n.**; HESSLE Zool. Bidr. Uppsala **5**.

Phisidia sagamica **sp. n.** Japan; HESSLE T.c. p. 207.

Phyllodoce panamensis **sp. n.** Panama; TREADWELL Proc. U.S. Nat. Mus. **52** p. 428.

Physalidonotus rugosus p. 189, *laevis* p. 193, *turritus* p. 195, *paucibranchiatus* p. 196, **spp. n.** S. Pacific; BENHAM Rept. Polych. Fisheries Austral. **3** pt. 4.

Pistia microlobata Japan p. 155, *macrolobata* Bonin-Inseln p. 157, *atypica* Japan p. 160, **spp. n.**, *P. marenzelleri* **nom. n.** for *P. maculata* Marenz. p. 157; HESSLE Zool. Bidr. Uppsala **5**.

Polycirrus medius **sp. n.** Japan; HESSLE T.c. p. 225.

Polymnia boniniana **sp. n.** Bonin-Inseln; HESSLE T.c. p. 177.

Polyodontes sibogae p. 131, *atromarginatus* p. 133, **spp. n.** E. Indies; HORST Siboga Exped. **24** 1 b.

Pontogenia nuda, *spinosa*, p. 62, *villosa* p. 139, **spp. n.** E. Indies; HORST Loc. cit.

Praxilla abyssorum vide *Asychis victoriae*.

Proclea glabrolimbata **sp. n.** Grahams Land; HESSLE Zool. Bidr. Uppsala **5** p. 201.

Sabellaria spinulosa development fertilisation; ZIEGLER Zool. Anz. **44** p. 586.

Scalisetosus australiensis **sp. n.** S Pacific; BENHAM Rept. Polych. Fisheries Austral. **3** pt. 4 p. 200.

Scione harrissoni **sp. n.** S. Pacific; BENHAM Rept. on Polych. Fisheries Austral. **4** pt. 2 p. 138.

Serpula lo biancoi **sp. n.** Santander; RIOJA Trab. Mus. Nac. Madrid **29** p. 77.

Sigalion bandaensis **sp. n.** E. Indies; HORST Siboga Exped. **24** 1 b p. 110.

Sosanopsis **gen. n.** (*Ampharetidae*) p. 111, *wireni* **sp. n.** Sweden, p. 112; HESSLE Zool. Bidr. Uppsala **5**.

Spinosphaera **gen. n.** (*Terebellidae*) p. 207, *pacifica* **sp. n.** Japan p. 208; HESSLE T.c.

Spirorbis table of spp.; BORG Zool. Bidr. fr. Uppsala **5** pp. 15–38.

Staurocephalites grammoides* **sp. n. for Annelid jaw from Upper Silurian; ETHERIDGE Rec. Austr. Mus. **11** p. 221.

Sthenelais filamentosus **sp. n.** N. Atlantic; DITLEVSEN Dan. Ingolf Exped. **4** pt. 4 p. 50.—*S. dubiosa* p. 112, *heterochela* p. 113, *malayana* p. 114, **spp. n.** E. Indies; HORST Siboga Exped. **24** 1 b.

Streblosoma japonica **sp. n.** Japan; HESSLE Zool. Bidr. Uppsala **5** p. 211.

Terebella punctata **sp. n.** Japan; HESSLE T.c. p. 189.

Terebellides minutus Feuerland p. 138, *longicaudatus* Süd Georgien p. 139, *antarcticus* Grahams Land p. 140, *kobei* Japan p. 140, **spp. n.**; HESSLE T.c.

Trichobranchus lobiungens **sp. n.** Uruguay p. 133, *glacialis* var. *antarcticus* **var. n.** Süd Georgien; HESSLE T.c.

(c) Myzostomida.

[Vacant.]

(d) Oligochaeta.

Clitellio characteristics of genus, *C. subtilis* **sp. n.** Naples; PIERANTONI Napoli Boll. Soc. Nat. **29**, p. 83.

Drawidia kanarensis p. 364, *hodgarti* p. 366, *affinis* p. 368, *rangamatiana* p. 369, *papillifer* p. 370, **spp. n.** India; STEPHENSON Rec. Ind. Mus. **13**.

Eudichogaster chittagongensis **sp. n.** India; STEPHENSON T.c. p. 411.

Eutyphoeus gigas **sp. n.** India; STEPHENSON T.c. p. 408.

Haplotaxis intermedia Pierant. come inquilino del *Petromyzon*; MONTICELLI Napoli Boll. Soc. Nat. **29**, p. 59.

Helodrilus welchi **sp. n.** U.S.A.; SMITH Proc. U.S. Nat. Mus. **52** p. 174.—*H. mariensis* **sp. n.** India; STEPHENSON Rec. Ind. Mus. **13** p. 414.

Heterodrilus characteristics of genus p. 82, *H. arenicolus* described p. 87; PIERANTONI Napoli Boll. Soc. Nat. **29**.

Hoplochaetella suctoria p. 388, *kempi* p. 392, *inornata* p. 395, *bifoveata* p. 398, *affinis* p. 399, **spp. n.** India; STEPHENSON, Rec. Ind. Mus. **13**.

Mesenchytraeus gelidus **sp. n.** p. 86 *solifugus* var. *rainierensis* **var. n.** p. 103, U.S.A.; WELCH Trans. Amer. Micr. Soc. **35**.—*M. altus* **sp. n.** Colorado; WELCH **36** T.c. p. 67.

Monopylephorus parvus Ditl. description; STEPHENSON Mem. Ind. Mus. **5** p. 485.

Octochaetus castellanus **sp. n.** India; STEPHENSON Rec. Ind. Mus. **13** p. 407.

Perionyx pallidus p. 376, *gravelyi* p. 378, *nanus* p. 381, **spp. n.**, *aborensis* var. *heterochaetus* **var. n.**, India; STEPHENSON T.c.

Pheretima annandalei **sp. n.** India; STEPHENSON T.c. p. 386.

(e) Hirudinea.

Ancyrobdella **gen. n.** *biwae* **sp. n.** Japan; OKA Annot. Zool. Japan **9** p. 185.

Blanchardiella festae p. 10, *ecuadoriensis* p. 12, *biolleyi* p. 13, **spp. n.** Centr. Amer.; DEQUAL Torino Boll. Mus. Zool. **31** No. 717.—*B. decemoculata* **sp. n.** Costa Rica; DEQUAL L.c. **32** No. 724 p. 13.

Calliobdella vide *Piscicola*.

Centropygus aurantiacus **sp. n.** Parana; DEQUAL Torino Boll. Mus. Zool. **32** No. 724 p. 12.

Diplobdella festae **sp. n.** Centr. Amer.; DEQUAL L.c. **31** No. 717 p. 5

Haemadipsa fallax Madagascar. p. 664, *morsitans* Madagascar p. 664, *ragans* Madagascar p. 665, *braueri* Seychelles p. 666, *noxia* New Guinea p. 667, *papuensis* New Guinea p. 667, *dussumieri* hab. incog. p. 668, **spp. n.**; BLANCHARD Bull. Soc. Path. exot. **10**.—*H. pittarellii* **sp. n.** Madagascar; DEQUAL Torino Boll. Mus. Zool. **32** No. 724 p. 6.

Haemadipsinae, general classification; BLANCHARD, Bull. Soc. Path. exot. **10** pp. 640-675.

Helobdella gemmata var. *nigropunctata* **var. n.** Costa Rica; DEQUAL Torino Boll. Mus. Zool. **32** No. 724 p. 6.

Hirudo hildebranti var. *carossii* **var. n.** Eritrea; DEQUAL Boll. Mus. Zool. Torino **32** No. 724 p. 7.

Lumbricobdella chamensis **sp. n.** Venezuela; DEQUAL Torino T.c. p. 14.

Philaemon minutus Samoa, *grandidieri* Madagascar, **spp. n.**; BLANCHARD Bull. Soc. Path. exot. **10** p. 655.

Piscicola crassicaudata, *gracilis* and *subfasciata*, synonymy with *Calliobdella* (*Piscicola*) *nodulifera*; LEIGH-SHARPE Proc. R. Phys. Soc. Edinb. **20** p. 119.

Podoclepsis **gen. n.** (*Glossosiphonidae*) *festae* **sp. n.** Centr. Amer.; DEQUAL Torino Boll. Mus. Zool. **31** No. 717 p. 2.

Trachelobdella carajbica **sp. n.** Venezuela; DEQUAL L.c. **32** No. 724 p. 2.

(*f*) **Echiuroidea.**

[Vacant.]

2. GEPHYREA (SIPUNCULOIDEA).

Gephyrea, discussion of relationships; BENHAM Rept. Fisheries Commonw. Austral. **4** pt. 3, 1916 pp. 161–162, and MEEK Rept. Dove Mar. Lab. **6** p. 46.

3. PRIAPULOIDEA.

[Vacant.]

4. PHORONIDEA.

Phoronidea, relations with Gephyrea &c; MEEK Rept. Dove Mar. Lab. **6** p. 46.

Phoronis ovalis and its larva *Actinotrocha branchiata*; MEEK T.c. p. 33.—*P. ovalis* Wright not a larval form, description; HARMER Q. J. Micr. Sci. **62** p. 115.

5. PTEROBRANCHIATA.

[Vacant.]

VII. BRACHIOPODA AND BRYOZOA

BY

F. W. EDWARDS.

(a) BRACHIOPODA

CONTENTS.

PAGE

I. TITLES 2

II. SUBJECT INDEX.. 4

General = 2003 (vacant)

Structure = 2007 (vacant)

Physiology = 2011 (vacant)

Development = 2015.. 4

Ethology = 2019 (vacant)

Aetiology = 2023 (vacant)

Distribution = 2027 :—

(α) Recent 4

(β) Fossil 4

III. SYSTEMATIC INDEX = 2031 4

I.—TITLES.

Ashworth, J. H. On larvæ of *Lingula* and *Pelagodiscus* (*Discinisca*). Edinburgh Trans. R. Soc. **51** 1915 (45–69) pls. iv and v. **1**

Broili, F. Die permischen Brachiopoden von Timor. *In*: Wanner, J. Paläontologie von Timor. Stuttgart 1916 lief. 7 (104 pp.) xiii Taf. **2**

de Brun, P. Le Barrémien supérieur a faciès urgonien de Brouzet-les-Alais (Gard). Cephalopodes et Brachiopodes. Paris Mém. Soc. géol. **21** 4 Mém. **51** 1916 (44–47) pls. iv–v. **3**

Clark, T. H. New Blastoids and Brachiopods from the Rocky Mountains. Bull. Mus. Comp. Zool. Harv. Coll. **61** no. 9 1917 (361–380) pls. i and ii. **4**

Douvillé, H. Les terrains secondaires dans le massif du Moghara à l'est de l'isthme de Suez, d'après les explorations de M. Couyat-Barthoux. Paléontologie. Paris Mém. Ac. Sci. **54** 1916 (1–184) pls. i–xxi. **5**

Dunbar, C. O. *Rensselaerina*, a new genus of Lower Devonian Brachiopods. Amer. J. Sci. New Haven Conn. **43** 1917 (466–470) pl. ii. **6**

Faura y Sans, M. Sintesis estratigrafica de los terranos primarios de Cataluña con una descripción de los yacimentos fossilíferos más principales. Madrid Mem. R. Soc. esp. Hist. Nat. **9** 1913 (1–202) lam. i–ix. **7**

Foerste, A. F. Upper Ordovician formations in Ontario and Quebec. Ottawa Canada Dept. Mines Geol. Surv. Mem. **83** 1916 (1–279). **8**

Foerste, A. F. The Richmond faunas of Little Bay de Noquette, in Northern Michigan. Ottawa Nat. **31** 1917 (97–103) pls. iv–vi. **9**

Foerste, Aug. F. Notes on Silurian fossils from Ohio and other central states. Ohio Journ. Sci. **17** 1917 (187–204 233–268) pls. viii–xii. **10**

Fourtau, R. Palaeontological notes. *In*: Hume, W. F. Report on the oilfields region of Egypt. Cairo Survey Dept. Geol. Rep. **1916** (82–94) pl. xi. **11**

Fuchs, A. Der Hunsrückschiefer und die Unterkoblenzschichten am Mittelrhein (Loreleigegend). 1. Teil. Beitrag zur Kenntnis der Hunsrückschiefer- und Unterkoblenzfauna der Loreleigegend. Berlin Abh. geol. Landesanst. N. F. **79** 1915 (1–80) pls. i–xviii. [Includes descriptions (as new) and figures of many species diagnosed by the writer in 1899 1901 and 1907]. **12**

Gerber, E. Revision der Liasversteinerungen von Bodmi und Zettenalp am Nordwestabhang des Sigriswilergrates. Bern Mitt. Natf. Ges. **1915** [1916] (248–262). **13**

Grönwall, K. A. The Marine Carboniferous of North-East Greenland and its Brachiopod fauna. Kjöbenhavn Medd. Grönl. **43** 1917 (509–618) pls. xxvii–xxx. **14**

Hayasaka, J. On the Carboniferous *Brachiopoda* from the Poshan district, Shantung, China. J. Geol. Soc. Tokyo **24** 1917 (169–196) [Japanese]. **15**

Hayasaka, J. On the Brachiopod genus *Lyttonia*, with several Japanese and Chinese examples. J. Geol. Soc. Tokyo **24** 1917 (437–472 Engl. rés. 43–53) pl. xviii. **16**

Hennig, E. Die Fauna der deutsch-ostafrikanischen Urgonfacies. Berlin Zs. D. Geol. Ges. **68** 1916 (441–476) Taf. xxx–xxxii. **17**

Jiménez de Cisneros, D. Geología y Paleontologia de Alicante. Madrid Trab. Mus. Nac. Ci. Nat. **21** 1917 (1–140) lam. i–xi. **18**

Jiménez de Cisneros, D. Noticia acerca de una especie del género *Zeilleria* encontrada en el Maestrichtiense de Alicante. Madrid Bol. Soc. Esp. Hist. Nat. **17** 1917 (421–422). **19**

Leidhold, Cl. Devon Fossilien von der Bithynischen Halbinsel (Kleinasien). Berlin Zs. D. geol. Ges. **69** 1917 (308–347) Taf. xi–xiii. **20**

Massy, Anne L. *Mollusca* and *Brachiopoda* of the Irish Atlantic slope, between 50 and 1,000 fathoms. London J. Conch. **15** 1916 (48–51). **21**

Mather, K. F. The Trenton fauna of Wolfe Island, Ontario. Ottawa Nat. **31** 1917 (33–40) pl. i. **22**

de Morgan, J. Note sur les Mollusques brachiopodes des faluns de la Touraine. Paris Bull. Soc. géol. **15** 1915 [1916] (260–273). **23**

Olsson, Axel. New and interesting Neocene fossils from the Atlantic coastal plain. Bull. Amer. Paleont. Ithaca N.Y. **5** (No. 24) 1914 (41–72) pls. viii–xii. **24**

Petitclerc, P. Note sur des fossiles nouveaux rares ou peu connus de l'est de la France. Vesoul (Haute-Saône) **1916-17** (1–78) pl. i–xi. **25**

Quiring, H. Beiträge zur Kenntnis der Spiriferenfauna des Mitteldevons der Eifel. Berlin Jahrb. geol. Landesanst. **35** 1915 (327–335) Taf. xiii. **26**

Reed, F. R. C. The Ordovician and Silurian *Brachiopoda* of the Girvan district. Edinburgh Trans. R. Soc. **51** 1917 (795–998) pls. i–xxiv. **27**

Reed, F. R. C. Ordovician and Silurian fossils from Yun-nan. Pal. Ind. Calcutta **6** 3 1917 (1–70) pls. i–viii. **28**

Rollier, L. Synopsis des Spirobranches (Brachiopodes) Jurassiques Celto-Souabes. Deuxième partie (Rhynchonellidés). Genève Mém. Soc. Pal. Suisse **42** 1917 (73–184). **29**

Ruedemann, R. Palaeontologic contributions from the New York state museum. Albany N.Y. Bull. State Mus. **189** 1916 (1–225) pls. i–xxxvi. **30**

(N–4840 *p*)

Savage, T. E. Alexandrian rocks of northeastern Illinois and eastern Wisconsin. Bull. Geol. Soc. Amer. **27** 1916 (305–324) pls. xv–xvii. **31**

Smith, W. S. and **Duror,** Caroline A. Stratigraphy of the Skykomish basin, Washington. J. Geol. Chicago **24** 1916 (559–582). **32**

Spriestersbach, J. Neue oder wenig bekannte Versteinerungen aus dem rheinischen Devon, besonders aus dem Lenneschiefer. Berlin Abh. geol. Landesanst. N. F. **80** 1915 (1–80) pls. i–xxiii. **33**

Stefanini, G. Specie nuove del Miocene veneto. Padova Att. Acc. ven.-trent. Ser. 3 **8** 1916 (151–162). **34**

Thomson, J. A. Diastrophic and other considerations in classification and correlation, and the existence of minor diastrophic districts in the Notocene. Wellington Trans. N.Z. Inst. **49** 1917 (397–413). **35**

Tilmann, N. Beiträge zur Geologie und Paläontologie von Südamerika. Die Fauna des unteren und mittleren Lias in Nord- und Mittel- Peru. N. Jahrb. Min. Stuttgart **41** 1917 (628–712) Taf. xxi–xxvi. **36**

Trechmann, C. T. The age of the Maitai series of New Zealand. London Geol. Mag. (6) **4** 1917 (53–64) pls. iv–v. **37**

Walcott, C. D. Cambrian Geology and Palaeontology. iv. No. 2. The *Albertella* fauna in British Columbia and Montana. Washington D. C. Smiths. Inst. Misc. Coll. **67** 1917 (9–59) pls. i–vii. **38**

Walcott, C. D. Cambrian geology and paleontology. iv. No. 3. Fauna of the Mount Whyte formation. Washington D. C. Smiths. Inst. Misc. Coll. **67** 3 1917 (61–114) pls. viii–xiii. **39**

Waring, C. A. Stratigraphic and Faunal relations of the Martinez to the Chico and Tejon of Southern California. San Francisco Proc. Calif. Acad. Sci. **7** 1917 (41–124) pls. vii–xvi. **40**

Watson, D. M. S. *Poikilosakos*, a remarkable new genus of Brachiopods from the upper Coal Measures of Texas. London Geol. Mag. (6) **4** 1917 (212–219) pl. xiv. **41**

II.—SUBJECT INDEX.

DEVELOPMENT. 2015

Lingula larva; **Ashworth, 1.**

DISTRIBUTION. 2027

(α) Recent.

Ireland; **Massy, 21.**

(β) Fossil.

Palaeozoic.

Spain; **Faura y Sans, 7.**

Cambrian.

Canada; **Walcott, 38, 39.**

U.S. (Montana); **Walcott, 38.**

Ordovician.

Scotland; **Reed, 27.**

Yun-nan; **Reed, 28.**

Canada; **Foerste, 8.**

Washington; **Smith** and **Duror, 32.**

Michigan; **Foerste, 9.**

Silurian.

Scotland; **Reed, 27.**

United States; **Ruedemann, 30.**

Ohio; **Foerste, 10.**

Illinois & Wisconsin; **Savage, 31.**

Ontario; **Mather, 22.**

Devonian.

Germany; **Fuchs, 12**: **Spriestersbach, 33**: **Quiring, 26.**

Asia Minor; **Leidhold, 20.**

Tennessee; **Dunbar, 6.**

Carboniferous.

Greenland; **Grönwall, 14.**

Montana; **Clark, 4.**

Texas; **Watson, 41.**

Shantung; **Hayasaka, 15.**

Permo-Carboniferous.

New Zealand; **Trechmann, 37.**

Permian.

Timor; **Broili, 2.**

Jurassic.

France; **Petitclerc, 25.**

Switzerland; **Gerber, 13.**

Sinai; **Douvillé, 5.**

Peru; **Tilmann, 36.**

Cretaceous.

France; **de Brun, 3.**

Spain; **Jiménez de Cisneros, 19.**

German E. Africa; **Hennig, 17.**

Tertiary.

France; **de Morgan, 23.**

Egypt; **Fourtau, 11.**

California; **Waring, 40.**

Virginia; **Olsson, 24.**

New Zealand; **Thomson, 35.**

III.—SYSTEMATIC.

†*Acanthothyris sinuata* p. 74, *inflata*, *zieteni* p. 75, *radwanowicensis*, *balinensis*, *sentosa*, *davidsoni* p. 77, *bradfordiensis* p. 78, *lorioli*, *impressata* p. 79, *dealbata*, *silicea* p. 80, **spp. n.** England, France and Germany Jurassic, Rollier Mém. Soc. Pal. Suisse **42.** [All named from previously published figures and misidentifications.]

†*Acrothele clitus* **sp. n.** Canada Cambrian, Walcott Smiths. Inst. Misc. Coll. **67** 3 p. 70.—†*A. medioradiata* **sp. n.** Scotland Ordovician, Reed Edinburgh Trans. R. Soc. **51** p. 813.

†*Atrypa lorana* **sp. n.** Rhein Devon, Fuchs Abh. geol. Landesanst. **79** p. 21.

†*Axiodeaneia* **gen. n.** near *Rhynchotretus* p. 374, for *platypleura* **sp. n.** Montana Carboniferous p. 375, Clark Bull. Mus. Comp. Zool. Harv. Coll. **61.**

†*Camarella* ? *conybearei* **sp. n.** Scotland Ordovician, Reed Edinburgh Trans. R. Soc. **51** p. 925.

†*Camarophoria antisella* **sp. n.** Timor Permian, BROILI Pal. v. Timor **7** 1916.—†*C. obesa* **sp. n.** Montana Carboniferous, CLARK Bull. Mus. Comp. Zool. Harv. Coll. **61** p. 373.

†*Camarotoechia llandoveriana* var. n. *diversiplicata* Scotland Silurian, REED Edinburgh Trans. R. Soc. **51** p. 943.—†*C. roadsi* **sp. n.** Ohio Silurian, FOERSTE Ohio J. Sci. **17** p. 250.

†*Chonetes advena* **sp. n.** Scotland Ordovician, REED Edinburgh Trans. R. Soc. **51** p. 915.—†*C. molengraafii, rothpletzi* **spp. n.** Timor Permian, BROILI Pol. v. Timor **7** 1916.—*C. bialata* **sp. n.** Rhein Devon, FUCHS Abh. geol. Landesanst. **79** p. 20.

†*Cistella laevigata* p. 261, *mariæ* p. 263, *plicata* p. 264, *pontileviensis* p. 265, *falunica* p. 266, *eugenii* p. 267, **spp. n.** Touraine Tertiary, DE MORGAN Bull. Soc. géol. **15** 1916.

†*Cliftonia andersoni* **sp. n.** Scotland Ordovician, REED Edinburgh Trans. R. Soc. **51** p. 913.

†*Clitambonites complectens* var. n. *albida*, Scotland Ordovician, REED Edinburgh Trans. R. Soc. **51** p. 916.

†*Clorinda transversa* **sp. n.** Illinois Silurian, SAVAGE Bull. Geol. Soc. Amer. **27** 1916 p. 317.

†*Conotreta conoidea* **sp. n.** Scotland Ordovician, REED Edinburgh Trans. R. Soc. **51** p. 817.

†*Crania bouryi* **sp. n.** Touraine Tertiary, DE MORGAN Bull. Soc. géol. **15** 1916 p. 271.

†*Cyclospira* ? *diversa* **sp. n.** Scotland Ordovician, REED Edinburgh Trans. R. Soc. **51** p. 950.

†*Dalmanella springfieldness* sp. n. Ohio Silurian, FOERSTE Ohio J. Sci. **17** p. 245.—†*D. jugosa* var. n. *subplicata* Michigan Ordovician, FOERSTE Ottawa Nat. **31** p. 99.

†*Dayia cymbula* var. n. *girvanensis*, Scotland Silurian, REED Edinburgh Trans. R. Soc. **51** p. 948.

†*Discina circumcincta* **sp. n.** Rhein Devon, SPRIESTERSBACH Abh. geol. Landessanst. **80** 1915 p. 6.—†*D.* (*Orbiculoidea*) *mediorhenana* p. 6, *sinosa* p. 7, **spp. n.** Rhein Devon, FUCHS Abh. geol. Landesanst. **79** 1915.

†*Discinisca singewaldi* **sp. n.** Bolivia Tertiary, SCHUCHERT Proc. U.S. Nat. Mus. **54** 1917 p. 116. [In paper by E. W. BERRY.]

†*Eichwaldia personalis* **sp. n.** Scotland Silurian, REED Edinburgh Trans. R. Soc. **51** p. 936.

†*Eudesia cardioides* **sp. n.** Sinai Jurassic, DOUVILLÉ Mém. Ac. Sci. **54** 1916 p. 64.

†*Girtyella woodworthi* **sp. n.** Montana Carboniferous, CLARK Bull. Mus. Comp. Zool. Harv. Coll. **61** p. 377.

†*Glottidia inexpectans* **sp. n.** Virginia Miocene, OLSSON Bull. Amer. Paleont. **5** (No. 24) 1914 p. 59.

†*Harknessella* **subgen. n.** vide *Orthis*. Reed.

†*Hemipronites carrickensis* p. 918, *thomsoni* p. 919, **spp. n.** Scotland Ordovician, REED Edinburgh Trans. R. Soc. **51**.—†*H. giraldi* var. n. *yunnanensis* Yunnan Ordovician, REED Pal. Ind. **63** p. 22.

†*Kingena simiensis* **sp. n.** California Eocene, WARING Proc. Calif. Acad. Sci. **7** p. 73.

†*Leptella pseudoretroflexa* **sp. n.** Scotland Ordovician, REED Edinburgh Trans. R. Soc. **51** p. 874.

†*Lingula hunsrückiana* **sp. n.** Rhein Devon, FUCHS Abh. geol. Landesanst. **79** p. 6.—†*L. semina, testatrix* p. 67, *vicina* p. 68, *subtrigona, elongatum* p. 69, **spp. n.** United States Silurian RUEDEMANN Bull. N.Y. State Mus. **189** 1916.—†*L. amabilis* p. 803, *crumenoides* p. 804, *mediostriata* p. 805, *pseudoquadrata* p. 806, *solvens* p. 807, **spp. n.** *brevis* varr. n. *angustior* p. 803, *carrickensis* p. 804, Scotland Ordovician, REED Edinburgh Trans. R. Soc. **51**.

†*Lingulasma* ? *ardmillanense* p. 808, *penultimum, pulcherrimum* p. 809, *quaestor* p. 810, *tenax* p. 811, **spp. n.** Scotland Ordovician, REED *T.c.*

†*Lyttonia* in Japan and China, HAYASAKA **16**.

†*Metacamarella* **gen. n.** for *Strickland*inia *balcletchiensis*, Scotland Silurian, REED Edinburgh Trans. R. Soc. **51** p. 934.

†*Micromitra* (*Paterina*) *davidsoni* **sp. n.** Scotland Ordovician, REED *T.c.* p. 797.—†*M.* (*P.*) *charon* **sp. n.** Canada Cambrian, WALCOTT Smiths. Inst. Misc. Coll. **67** 3 p. 69.

Muhlfeldtia echinata, MASSY **21.**

†*Nicolella* **subgen. n.** vide *Orthis.* Reed

†*Obolus audax* p. 798, *maccullochi* p. 799, **spp. n.** Scotland Ordovician, REED Edinburgh Trans. R. Soc. **51.**—†*O. damo* **sp. n.** Canada Cambrian, WALCOTT Smiths. Inst. Misc. Coll. **67** 3 p. 69.

†*Orbiculoidea molina* **sp. n.** U.S. Silurian, RUEDEMANN Bull. N.Y. State Mus. **189** 1916 p. 71.—†*O. armstrongi, shallochensis* p. 820, *stincharensis* p. 821, **spp. n.** Scotland Ordovician, REED Edinburgh Trans. R. Soc. **51.**

†*Orthis playfairi* **sp. n.** p. 829, *calligramma* varr. n. *craigensis* p. 827, *subplicata* p. 828, *O.* (*Plectorthis*) *ardmillanensis* p. 831, *subfissicosta* p. 834, *subplicatella* p. 835, *thraivensis* p. 836, **spp. n.**, *rustica* var. n. *paucicostata* p. 833, *O.* (*Dinorthis*) *flabellum* **var. n.** *carrickensis* p. 837, *O.* (*Hebertella bellatrix* **sp. n.** p. 841, *O.* (*Dalmanella*) *elegantula* var. n. *drummockensis* p. 850, *testudinaria* varr. n. *gracilis* p. 854, *shallochensis* p. 855, *federata* **sp. n.** p. 851—*O.* (*Rhipidomella*) *prematura* **sp. n.** p. 857, *O.* (*Schizophorella*, **subgen. n.** p. 858), *O.* (*Nicolella*, **subgen. n.** p. 860) *actoniae* var. n. *asteroidea* p. 861, *O.* (*Harknessella*) **subgen. n.** p. 862, Scotland Ordovician and Silurian, REED *T.c.* —†*O. lorana, taunica* p. 10, *bicallosa* p. 12, *foliifer, transversaria* p. 13, *nocheri* p. 15, **spp. n.** Rhein Devon, FUCHS Abh. geol. Landesanst. **79** 1915.—†*O. praetor* sp. n. Yun-nan Ordovician, REED Pal. Ind. **6** 3 p. 21.

†*Orthotetes major* **sp. n.** Rhein Devon, FUCHS Abh. geol. Londesanst. **79** p. 18.

†*Pachymagas abnormis* **sp. n.** New Zealand Tertiary, THOMSON Trans. N. Z. Inst. **49** p. 412.

†*Parastrophia emerita* p. 927, *thraivensis, youngi* p. 930, **spp. n.** Scotland Ordovician, REED Edinburgh Trans. R. Soc. **51.**

†*Parathyris* **gen. n.** p. 35, *plicatoides, plicatissima* **spp. n.** p. 36, Sinai Jurassic, DOUVILLÉ Mém. Ac. Sci. **54** 1916.

†*Paterula* ? *albida* p. 800, *jamesoni* p. 801, **spp. n.** Scotland Ordovician, REED Edinburgh Trans. R. Soc. **51.**

†*Pentamerus* (*Barrandella*) *undatus* var. n. *penkillensis* Scotland Silurian, REED *T.c.* p. 934.

†*Philhedra sinensis* **sp. n.** Yun-nan Ordovician, REED Pal. Ind. **6** 3 p. 20.—†*P. drummuckensis, mullochensis*, p. 822, *penkillensis, playfairi* p. 823, **sp. n.** Scotland Ordovician and Silurian, REED Edinburgh Trans. R. Soc. **51.**

Platydia anomioides, MASSY **21.**

†*Playfairia* **subgen. n.** *vide Rafinesquina.* Reed.

†*Plectambonites ruralis* p. 879, *subcorrugatella* p. 886, **spp. n.**, *quinquecostata* varr. n. *balclatchiensis* p. 877, *cylindrica, depressa* p. 878, *sublobata* p. 879, *segmentum* var. n. *woodlandensis* p. 881, *sericea* varr. n. *albida, conspicua* p. 882, *craigensis* p. 883, *semiruyeta* p. 884, *thraivensis* p. 885, *transversalis* varr. n. *mullochensis* p. 887, *penkillensis* p. 888, Scotland Ordovician and Silurian, REED Edinburgh Trans. R. Soc. **51.**—†*P. punctostriatus* **sp. n.** Ontario Silurian, MATHER Ottawa Nat. **31** p. 38.

†*Poikilosakos* **gen. n.** *Lyttoniidae* for *P. petoloides* **sp. n.** Texas Carboniferous, WATSON Geol. Mag. **4** p. 212.

†*Porambonites acutiplicata* **sp. n.** Scotland Ordovician, REED Edinburgh Trans. R. Soc. **51** p. 923.

†*Productus* (? *Marginifera*) *wanneri* **sp. n.** Timor Permian, BROILI Pal. v. Timor **7** 1916.

†*Protozyga carrickensis* **sp. n.** Scotland Ordovician, REED Edinburgh Trans. R. Soc. **51** p. 945.

†*Pseudocrania multifilosa* **sp. n.** Scotland Ordovician, REED *T.c.* p. 826.

†*Rafinesquina breviusculus, pergibbosa* **spp. n.** Michigan Ordovician, FOERSTE Ottawa Nat. **31** p. 101.—†*R. deltoidea*, SMITH & DUROR **32.**—†*R. expansa* var. n. *macalluimi* p. 865, *R.* (*Playfairia*) **subgen. n.** p. 866) *felix* p. 867, *richardsoni* p. 868, **spp. n.**, *deltoidea* varr. n. *multicorrugata* p. 866, *tenuicorrugata* p. 867, *R.* ? *brumalis, subarachnoidea* **spp. n.** p. 870, Scotland Ordovician and Silurian, REED Edinburgh Trans. R. Soc. **51.**

†*Renselaerina* **gen. n.** *Centronellidae* p. 466, for *R. medioplicata* **sp. n.** Tenessee Devonian p. 469, DUNBAR Amer. J. Sci. **43.**

†*Rhinobolus? balclatchiensis* **sp. n.** Scotland Ordovician, REED Edinburgh Trans. R. Soc. **51** p. 802.

†*Rhynchonella renevieri* p. 85, *dunrobinensis, obtusiloba* p. 86, *gussmanni* p. 90, *fronto* p. 91, *squamiplex, anglica, rimosella* p. 92, *northamptonensis* p. 96, *rufimontana, dumbletonensis* p. 97, *fallaciosa, keilbergensis* p. 99, *heiningensis* p. 100, *temnorhyncha* p. 101, *metensis* p. 103, *lugdunensis* p. 104, *diptycha, ligeriana, oblonga* p. 105, *raui* p. 106, *vallesiaca* p. 107, *radstockiensis* p. 108, *latecostata* p. 109, *abbatiae* p. 112, *haresfieldensis* p. 114, *subacarus, savignacensis* p. 117, *acaroides, ledonica* p. 118, *parviloba* p. 119, *ardescica* p. 121, *trigeri, ornithopsis, grossouvrei, trachyptycha* p. 122, *sublaevis, pauciplicata, tenuiplicata, furcatella* p. 123, *minor* p. 126, *asymetrica* p. 127, *hautquintiana, quadricristata, fornax* p. 128, *quinquecristata, fornicata, tricristata, neumayri, obtusicosta* p. 129, *planifrons, stria* p. 130, *bonarellii* p. 131, *sexplicosa* p. 132, *eugenii, ferdinandi* p. 133, *pseudodecorata, exaltata, dilatata, riegoviana* p. 139, *pseudoacuta, folita, silicea* p. 140, *aliformis* p. 145, *walkeri* p. 148, *haasi, normandica* p. 150, *haugi, alemanica* p. 151, *arcuata, planata, blumbergensis, basileensis* p. 152, *oxoniensis, rambertensis* p. 153, *silicicola* p. 155, *crassa* p. 157, *maxima* p. 158, *polonica, deiningensis* p. 159, *gallica, quadratoides* p. 160, *brisgoviensis, quadrata, blumbergensis* p. 161, *riedlingensis, yaxleyensis* p. 162, *bugeysiaca* p. 164, *buckmani* p. 165, *longula, longovicensis* p. 167, *moveliérensis, bradfordiana* p. 168, *eudesi* p. 169, *subinconstans*, p. 170, *hudlestoni* p. 172, *pseudorostrata, prosimilis, möschi* p. 174, *jacobi* p. 175, *guebhardi, salevensis* p. 177, *obtusa, speciosa, kelheimensis* p. 178, **spp. n.** England, France and Germany Jurassic, ROLLIER Mém. Soc. Pal. Suisse **42** [all named from previously published figures and misidentifications.]—†*R. wanneri* **sp. n.** Peru Jurassic, TILMANN N. Jahrb. Min. **41** p. 691.—†*R. dietrichi* **sp. n.** Deutsch Ostafrika Urgonkalk, HENNIG Zs. D. Geol. Ges. **68** 1916 p. 463.—†*R. hanieli* **sp. n.** Timor Permian, BROILI Pal. v. Timor **7** 1916.—†*R. pugnus pauciplicata*, **var. n.** *Gürichi*, **sp. n.** p. 167, mit *bisellata*, **var. n.** *bifurcata*, **var. n.** p. 169, Oberdevon Brünn, OPPENHEIMER Verh. nat. f. Ver. and Brünn. **54.**

†*Rhynchospira* (*Homoeospira*) *camreganensis* **sp. n.** p. 952, *bouchardi* var. n. *mullochensis* p. 951, Scotland Silurian, REED Edinburgh Trans. R. Soc. **51.**

†*Rhynchotreta ardmillanensis* **sp. n.** Scotland Ordovician, REED p. 941. *T.c.*

†*Scenidium greenoughi* **sp. n.** p. 920, *lewisi* varr. n. *asteroidea* p. 921, *craigensis* p. 922, Scotland Ordovician, REED *T.c.*

†*Schizocrania asteroidea* **sp. n.** Scotland Ordovician, REED *T.c.* p. 819.

†*Schizophorella* **subgen. n.** vide *Orthis*. Reed.

†*Schuchertella inexpectata* p. 906, *pertinax* p. 907, **spp. n.** Scotland Ordovician and Silurian, REED *T.c.*—†*S. pecten* var. n. *robusta*, SAVAGE Bull. Geol. Soc. Amer. **27** 1916 p. 316.

†*Siphonotreta? thraivensis* sp. n. Scotland Ordovician, REED Edinburgh Trans. R. Soc. **51** p. 811.

†*Spirifer assimilis* p. 22, *loranus* p. 23, *explanatus* p. 25, *bornicensis* p. 26, **spp. n.** Rhein Devon, FUCHS Abh. geol. Landesanst. **79** 1915.—†*S. crassifulcitus* p. 7, *dorsocarus* p. 11, *assmani, parcefurcatus* p. 16, **spp. n.** Rhein Devon, SPRIESTERSBACH Abh. geol. Landesanst. **80** 1915.—†*S. neptunicus* sp. n. Eifel Devon, QUIRING Jahrb. geol. Landesanst. **35** 1915 p. 327.—†*S. fulmari* **sp. n.** p. 569, *rectangulus* var. n. *alta* p. 571, Greenland Carboniferous, GRÖNWALL Medd. Grönl. **43.**

†*Spiriferina myllii* **sp. n.** Greenland Carboniferous, GRÖNWALL Medd. Grönl. **43** p. 560.—†*S. steinmanni* p. 683, *bistrami* p. 685, *densiplicata* p. 688, **spp. n.** Peru Jurassic, TILMANN N. Jahrb. Min. **41.**

†*Spirigera globula* p. 29, *aequistria* p. 30, **spp. n.** Rhein Devon, FUCHS Abh. geol. Landesanst. **79** 1915.

†*Streptis horneri* **sp. n.** Scotland Silurian, REED Edinburgh Trans. R. Soc. **51** p. 912.

†*Streptorhynchus pseudopelargonatus* **sp. n.** Timor Permian, BROILI Pal. v. Timor **7** 1916.

†*Stricklandinia pyriformis* **sp. n.** p. 317, with varr. n. *elongata*, p. 318, *vasculosa*, p. 319, *circularis* **sp. n.** p. 319, *breviuscula* **sp. n.** p. 320, Illinois Silurian, SAVAGE Bull. Geol. Soc. Amer. **27** 1916. —†*S. mullochensis* **sp. n.**, *lirata* var. n. *scotica*, Scotland Silurian, REED, Edinburgh Trans. R. Soc. **51** p. 932.

†*Stropheodonta donax* p. 892, *jamesoni* p. 893, **spp. n.**, *S.* (*Leptostrophia*) *subfilosa* **sp. n.** p. 895, *filosa* var. n. *mullochensis* p. 894, *S.* (*Brachyprion*) *columbana* **sp. n.** p. 896, *S. ? nicholsoni* **sp. n.** p. 898, Scotland Ordovician and Silurian, REED *T.c.*

†*Strophodonta furcillistria* **sp. n.** Rhein Devon, FUCHS Abh. geol. Landesanst. **79** p. 16.

†*Strophomena deficiens* p. 903, *valens* p. 905, **spp. n.**, *antiquata* var. n. *woodlandensis* p. 902, Scotland Ordivician and Silurian, REED Edinburgh Trans. R. Soc. **51**.—†*S. parvula* **sp. n.** Michigan Ordovician, FOERSTE Ottawa Nat. **31** p. 102.

†*Strophonella penkillensis* **sp. n.** Scotland Silurian, REED Edinburgh Trans. R. Soc. **51** p. 900.

†*Terebratula de-tonii* **sp. n.** N. Italy Miocene, STEFANINI Atti Acc. ven.-trent. **8** 1916 p. 157.—†*T. auxonensis* **sp. n.** E. France Sinemurian, PETITCLERC Fossiles nouveaux etc. Vesoul **1917** p. 5.—†*T. cossmanni* **sp. n.** France Cretaceous, DE BRUN Mém. Soc. géol. **51** 1916 p. 47. —*T. miocenica*, FOURTAU **11**.—†*T. superates* **sp. n.** Sinai Jurassic, DOUVILLÉ Mém. Ac. Sci. **54** 1916 p. 63.—†*T. Richteri*, **nom. n.** for *Terebratula subcurvata* R. Richter, OPPENHEIMER Verh. nat. f. ver. Brünn. **54** p. 188.

†*Trematis craigensis*, *melliflua* **spp. n.** Scotland Ordovician, REED Edinburgh Trans. R. Soc. **51** p. 818.

†*Triplecia craigensis* p. 908, *nucleoides* p. 909, *woodlandensis* p. 910, **spp. n.** Scotland Ordovician and Silurian, REED *T.c.*

†*Virgiana barrandei* varr. n. *mayvillensis* p. 321, *major* p. 322, SAVAGE Bull. Geol. Soc. Amer. **27** 1916.

†*Waldheimia popilanica*, **sp. n.**, Mittl. Kelloway Russland, KRENKEL Palaeontographica Stuttgart **61** p. 338.

†*Wimanella catulus* **sp. n.** Canada Cambrian, WALCOTT Smiths. Inst. Misc. Coll. **67** 3 p. 70.

†*Zeilleria* **sp. n.** (not named) Spain Cretaceous, JIMENEZ DE CISNEROS Bol. Soc. Esp. Hist. Nat. **17** p. 421.

†*Zygospira orbis* **sp. n.** Scotland Ordovician, REED Edinburgh Trans. R. Soc. **51** p. 944.—†*Z. recurvirostris* var. n. *turgida* Michigan Ordovician, FOERSTE Ottawa Nat. **31** p. 103.

VII (b) BRYOZOA

CONTENTS.

PAGE

I. TITLES 10

II. SUBJECT INDEX.

General = 2003 11

Structure = 2007 (vacant)

Physiology = 2011 (vacant)

Development = 2015 (vacant)

Ethology = 2019 (vacant)

Variation and Aetiology = 2023 (vacant)

Distribution = 2027 :—

(a) Recent :—

(α) Marine 11

(β) Non-Marine 11

(b) Fossil 11

III. SYSTEMATIC INDEX 12

I.—TITLES.

Annandale, N. Zoological results of a tour in the far east. *Polyzoa Entoprocta* and *Ctenostomata*. Calcutta Mem. Asiatic Soc. Bengal **6** 1916 (13–37) pls. i and ii. **1**

Baldasseroni, V. Due interessanti casi di commensalismo. Bios Geneva **2** 1915 (317–320) 1 tav. **2**

Barroso, M. G. Notas sobre briozoos. Madrid Bol. Soc. esp. Hist. Nat. **17** 1917 (494–499). **3**

Brydone, R. M. Notes on new or imperfectly known Chalk *Polyzoa*. London Geol. Mag. (6) **4** 1917 (49–53 145–148 492–496) pls. iii ix xxxii. **4**

Canu, F. Bryozoaires fossiles des terrains éocéniques du Plá de la Gárgara, prés Aiguafreda (Lutecien). Barcelona Butlleti Inst. Catalana d'Hist. Nat. **10** 1913 (102–105) pl. ii. **5**

Canu, F. Bibliographie paléontologique relative aux Bryozoaires du bassin de Paris. Paris Bull. Soc. géol. (4) **15** 1916 (293–305). **6**

Canu, F. Bibliographie primitive relative aux Bryozoaires. Paris Bull. Soc. géol. (4) **15** 1916 (387–392). **7**

Canu, F. Les Bryozoaires fossiles des terrains du Sud-ouest de la France. IX. Aquitanien. Paris Bull. Soc. géol. (4) **15** 1916 (320–334) 2 pls. **8**

Canu, F. Les Bryozoaires fossiles des terrains du Sud-Ouest de la France. X. Burdigalien. Paris Bull. Soc. géol. **16** 1915 [1917] (127–152) pls. ii–iii. **9**

Canu, F. and **Bassler**, R. S. A synopsis of American early Tertiary Cheilostome *Bryozoa*. Washington D. C. Bull. U.S. Nat. Mus. **96** 1917 (1–87) pls. i–vi. **10**

Etheridge, R., *Junr*. *Vetofistula*; a new form of Palaeozoic *Polyzoa*, Reid's Gap. Brisbane Geol. Surv. Queensland **260** 1917 (17–20) pl. iv. **11**

Faura y Sans, M. Caracterizacion de la fauna briozoaria del Maestrichtiense en el Monte Perdido (Pirineos centrales del Alto Aragón). Madrid Bol. Soc. esp. Hist. Nat. **17** 1917 (191–194). **12**

Faura y Sans, M. and **Canu**, F. Sur les Bryozoaires des terrains tertiaires de la Catalogne. Treb. Inst. Calalana d'Hist Nat. **1916** [1917] (1–137) pls. i–ix. **13**

Foerste, A. F. Upper Ordovician formations in Ontario and Quebec. Ottawa Canada Dept. Mines Geol. Surv. Mem. **83** 1916 (1–279). **14**

Friedl, P. H. Bryozoen der Adria. Zool. Anz. Leipzig **49** 1917 (225–240 268–280). **15**

Hentschel, E. Biologische Untersuchungen den tierischen und pflanzlichen Bewuchs im Hamburger Hafen. Mitt. Zool. Mus. Hamburg **33** 2 1916 (1–172) 2 Taf. **16**

Herwig, E. Die Avicularien von *Bugula flabellata*. Arch. Naturg. **81** A 1916 (156–159) 1 Taf. **17**

Hurrell, H. E. The *Polyzoa*. Micrologist Manchester **3** 1916 (28–41) figs. **18**

Lang, W. D. The genotypes of some polyzoan genera. London Geol. Mag. (6) **4** 1917 (169–174). **19**

Lang, W. D. On some new Cenomanian and Turonian Cheilostome *Polyzoa*. London Geol. Mag. (6) **4** 1917 (256–258) pl. xvii. **20**

Latham, V. A. Mounting Zoophytes and Polyzoa. Trans. Amer. Micr. Soc. **34** 1915 (55–56). **21**

†**Levinsen**, G. M. R. Danmarks Expeditionen til Groenlands nordostkyst 1906–1908. *Bryozoa*. Kjobenhavn Medd. Groenl. **43** No. 16 1917 (432–472) pls. xix–xxiv. [A posthumous paper edited by Ad. S. Jensen.] **22**

Maluquer, J. Organització i increment de la seccio oceanogràfica ... Collections d'animals marins. Junta Ci. Nat. Barcelona **2** 1 1917 (216–238). **23**

Mather, K. F. The Trenton Fauna of Wolfe Island, Ontario. Ottawa Nat. **31** 1917 (33–40) pl. i. **24**

Metzner, P. Die Bryozoen (Moostierchen) der sächsischen Oberlandsitz. Abh. nat. Ges. Isis Bautzen **1913–15** [1916] (46–58) 2 Taf. **25**

[**Okada**, Y. A key to the Japanese *Polyzoa* and their localities. (Japanese).] Dobuts. Z. Tokyo **29 1917** (277–280 364–369 393–397). **26**

Okada, Yaichirô. A report on the Cylostomatous *Bryozoa* of Japan. Tokyo Annot. Zool. Japon. **9** 1917 (335–360). **27**

Osburn, R. C. The *Bryozoa* of the Tortugas Islands, Florida. Papers Tortugas Lab. Carnegie Inst. Washington **5** 1914 (181–222) figs. **28**

Rousselet, C. F. Some further notes on collecting and mounting *Rotifera* [and *Polyzoa*]. J. Quekett Microsc. Club **13** 1917 (321–328). **29**

Smith, F. and **Green**, B. R. The Porifera, Oligochaeta, and certain other groups of invertebrates in the vicinity of Douglas Lake, Michigan. Rept. Michigan Acad. Sci. **17** 1916 (81–4). **30**

White, H. T. *Bryozoa* of the Georgian Bay region. Contr. Canadian Biol. Ottawa Fasc. **2** (Supp. to **47th**. Ann. Rept. Dept. Fisheries) **1917** (195–199). **31**

II.—SUBJECT INDEX.

GENERAL. 2003

Bibliography ; **Canu, 6, 7.**

Technique ; **Hurrell, 18 ; Latham, 21 ; Rousselet, 28.**

DISTRIBUTION. 2027

(*a*) RECENT.

(*α*) *Marine.*

Greenland ; **Levinsen, 22.**

Hamburg ; **Hentschel, 16.**

Spain ; **Maluquer, 23.**

S. Spain ; **Barroso, 3.**

Japan ; **Okada, 26, 27.**

Florida ; **Osburn, 28.**

(*β*) *Non-Marine.*

England ; **Hurrell, 18.**

Saxony ; **Metzner, 25.**

China ; **Annandale, 1.**

Malay Peninsula ; **Annandale, 1.**

Michigan ; **Smith & Green, 30.**

Canada ; **White, 31.**

(*b*) FOSSIL.

Ordovician.

Canada ; **Foerste, 14.**

Devonian.

Queensland ; **Etheridge, 11.**

Silurian.

Ontario ; **Mather, 24.**

Cretaceous.

England ; **Brydone. 4.**

England ; **Lang, 20.**

Spain ; **Faura y Sans, 12.**

Tertiary.

France ; **Canu, 8, 9.**

Spain ; **Canu, 5 : Faura y Sans & Canu, 13.**

U.S.A. ; **Canu & Bassler, 10.**

III.—SYSTEMATIC. 2031

British Freshwater **spp.** reviewed, HURRELL **18**.

OKADA **26** diagnoses the following in Japanese: *Brettia ijimai, Menipea longispinosa, sympodia, Scrupocellaria aviculaoides, Caberea highasii, gigantoceras, Kinetoskias mitsukurii, Bugula birostrata, Carbacea sagamiensis, Flustra stolonifera, Adeonella vulgaris, hexangularis, Retepora misakiensis, watanabei, Reteporella crenulata, kinoshitai, Lepralia spatulata, nijimaensis yanagii, Smittia lanceolata, mucronella denticulata, Palmicellaria dimorpha, Schizoporella kiiensis, sagamiensis, Cellepora trirostrata, cuculata, japonica, rostrata.*

†*Acanthionella* **gen. n.** type *Escharifora typica*, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 72.

†*Acanthocella* **gen. n.** *Cribrilinidae* p. 35, *erinacea* **sp. n.** Carolina Tertiary p. 36, CANU & BASSLER *T.c.*

†*Actinopora plicata* **sp. n.** France Aquitanian, CANU Bull. Soc. géol. **15** 1916 p. 332.

†*Adenifera* **gen. n.** *Electrinidae, inarmata* **sp. n.** Carolina Tertiary, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 13.

†*Adeonella folliculata* **sp. n.** Carolina Tertiary, CANU & BASSLER *T.c.* p. 66.

†*Aechmella* **gen. n.** *Onychocellidae* for *filimargo* **sp. n.** Alabama Tertiary, CANU & BASSLER *T.c.* p. 29.

†*Aimulosia* (?) *aviculifera* **sp. n.** France Tertiary, CANU Bull. Soc. géol. **16** p. 144.

Alcyonidium mytili, ANNANDALE **1**.

Arborella **gen. n.** near *Tubucellaria* (?) for *dichotoma* **sp. n.** Tortugas Is., OSBURN Papers Tortugas Lab. **5** 1914 p. 202.

†*Bathosella* **gen. n.** type *Mucronella aspera*, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 43.

Beania cupulariensis **sp. n.** Tortugas Is., OSBURN Papers Tortugas Lab. **5** 1914 p. 190.

Berenicea ampulliformis p. 351, *rotunda* p. 352 **spp. n.** Japan, OKADA Annot. Zool. Japon. **9**.—†*B. stipata* **sp. n.** France Tertiary, CANU Bull. Soc. géol. **16** p. 149.

Bowerbankia caudata, ANNANDALE **1**.

Bugula micro-oecia **sp. n.** Tortugas Is., OSBURN Papers Tortugas Lab. **5** 1914 p. 187.—*B. flabellata*, HERWIG **17**.

†*Catenicella subseptentrionalis* **sp. n.** Alabama Tertiary, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 63.

Chitaspis **gen. n.** *Urnatellidae* p. 16, for *athleticus* **sp. n.** Siam p. 17, ANNANDALE Mem. Asiatic Soc. Bengal **6** 1916.

†*Coelopora* **nom. n.** for *Antropora* Lang *non* Norman, LANG Geol. Mag. **4** p. 169.

†*Corymboporella* nom. n. for *Corymbopora* Lang *non* Michelin, LANG *T.c.* p. 169.

†*Cribrendœcium* **gen. n.** *Cribrilinidae* for *tenuicostulatum* **sp. n.** Carolina Tertiary, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 36.

Cribrilina cribrosa var. n. *perforata* Adria, FRIEDL Zool. Anz. **49** p. 236.

†*Cribrilina tumuliformis, seafordensis* p. 51, *transita* p. 492, *T-formis, bramfordensis* p. 493, *repleta, golanthis* p. 495, **spp. n.** England Cretaceous, BRYDONE Geol. Mag. **4**.

Crisia simplex **sp. n.** Japan, OKADA Annot. Zool. Japon. **9** p. 340.

Crisulipora ijimai **sp. n.** Japan, OKADA *T.c.* p. 343.

†*Cystisella* **gen. n.** type *Porella saccata, midwayanica* **sp. n.** Alabama Tertiary, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 53.

†*Dacryonella* **gen. n.** *Onychocellidae* for *octonaria* **sp. n.** U.S. Tertiary, CANU & BASSLER *T.c.* p. 28.

†*Didymosella* **gen. n.** type *Porina larvalis, crassa* **sp. n.** Alabama Tertiary, CANU & BASSLER *T.c.* p. 43.—†*D. acutirostris* **sp. n.** Spain Tertiary, FAURA Y SANS & CANU Treb. Inst. Catalana **1916** p. 90.

†*Diplopholeos* **gen. n.** *Onychocellidae* for *fusiforme* **sp. n.** U.S. Tertiary, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 26.

†*Ellisina laxa* **sp. n.** U.S. Tertiary, CANU & BASSLER *T.c.* p. 19.

Emballotheca stylifera, LEVINSEN **22**,

†*Enoplostomella* **gen. n.** *Stomachetosellidae* for *defixa* **sp. n.** Alabama Tertiary, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 46.

†*Eschara nodulifera* var. n. *porocia* Spain Tertiary, FAURA & CANU Pub. Inst. Catalana **1916** p. 92.

Escharella indivisa **sp. n.** Greenland, LEVINSEN Medd. Groenl. **43** 1917 450.—*E. costifera* **sp. n.** Tortugas Is., OSBURN Papers Tortugas Lab. **5** 1914 p. 203.

†*Filisparsa propinqua* **sp. n.** Spain Tertiary, FAURA Y SANS & CANU Treb. Inst. Catalana **1916** p. 114.

†*Floridinella* **gen. n.** *Onychocellidae* for *ricksburgica* **sp. n.** Alabama Tertiary, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 28.

†*Gastropella* **gen. n.** *Acroporidae* p. 37, for *ventricosa* **sp. n.** Arkansas Tertiary p. 38, CANU & BASSLER *T.c.*

†*Grammella* **gen. n.** for *Membranipora crassimarginata*, CANU Bull. Soc. géol. **16** p. 131.—†*G. transversa* **sp. n.** Carolina Tertiary, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 20.

†*Hallopora varia, obliqua* **spp. n.** Ontario Silurian, MATHER Ottawa Nat. **31** p. 36.

†*Hapsidopora* **gen. n.** p. 256, for *harmeri, arcuata* **spp. n.** England Cretaceous p. 257, LANG Geol. Mag. **4**.

Harmeria, definition, LEVINSEN **22**.

†*Hemicyclopora parajuncta* **sp. n.** Carolina Tertiary, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 69.

†*Hincksina jacksonica* p. 15, *megavicularia* p. 16, **spp. n.** U.S. Tertiary, CANU & BASSLER *T.c*

Hippadenella **gen. n.** type *Flustra margaritifera*, CANU & BASSLER p. 54, *T.c.*

Hippellozoon **gen. n.** type *Retepora novezelandiae*, CANU & BASSLER p. 55, *T.c.*

†*Hippodiplosia* **gen. n.** for *Lepralia* part p. 326, *granulosa* p. 327, *verrucosa* p. 328, **spp. n.** France Aquitanian, CANU Bull. Soc. géol. **15** 1916.—*H. asaepta* **sp. n.** Spain Tertiary, FAURA Y SANS & CANU Treb. Inst. Catalana **1916** p. 91.

†*Hippomenella* **gen. n.** type *Lepralia mucronelliformis*, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 41.

†*Hippopodina vibraculifera* **sp. n.** U.S. Tertiary, CANU & BASSLER *T.c.* p. 61.

Hippoporella **gen. n.** type *Lepralia hippopus* Smith, LEVINSEN Medd. Groenl. **43** 1916 pp. 432-472.

†*Hippoporina rarepuncta* **sp. n.** France Aquitanian, CANU Bull. Soc. géol. **15** 1916 p. 325.—†*H. hexagonalis* **sp. n.** France Tertiary, CANU Bull. Soc. géol. **16** p. 143.

†*Hippozeugosella* **gen. n.** type *Bactridium hagenowi, teges* **sp. n.** Florida Tertiary, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 42.

Hislopia, key to species, *malayensis* **sp. n.** Siam, ANNANDALE Mem. Asiatic Soc. Bengal **6** 1916 p. 35.

Holoporella magnifica **sp. n.** Tortugas Is., OSBURN Papers Tortugas Lab. **5** 1914 p. 216.—†*H. tubulosa* **sp. n.** France Aquitanian, CANU Bull. Soc. géol. **15** 1916 p. 331.

†*Kleidionella* **gen. n.** *Celleporidae* for *grandis* **sp. n.** U.S. Tertiary, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 72.

†*Kymella* **gen. n.** type *Cyclicopora polaris*, CANU & BASSLER, *T.c.* p. 44.

†*Leiosella* **gen. n.** *Stomachetosellidae* for *rostifera* **sp. n.** Alabama Tertiary, CANU & BASSLER *T.c.* p. 48.

Lepralia uvulifera **sp. n.** Tortugas Is., OSBURN Papers Tortugas Lab. **5** 1914 p. 210.

Lepraliella **gen. n.** type *Cellepora contigua* Smith, LEVINSEN Medd. Groenl, **43** 1917 p. 466.

†*Lichenopora sagamiensis* **sp. n.** Japan, OKADA Annst. Zool. Japon. **9** p. 356.—†*L. eltiptica* **sp. n.** France Aquitanian, CANU Bull. Soc. géol. **15** 1916 p. 333.

†*Lunularia lamellifera* **sp. n.** France Tertiary, CANU Bull. Soc. géol. **16** p. 133.

†*Membranipora spinea* **sp. n.** France Tertiary, CANU Bull. Soc. géol. **16** p. 129.—†*M. crateroides* **sp. n.** England Cretaceous, BRYDONE Geol. Mag. **4** p. 49.—†*M. almerai* **sp. n.** Spain Tertiary, CANU Butll. Inst. Catalana **10** 1913 p. 103.

†*Membraniporella taeniata, bitubularis* p. 50, *thoraciformis* p. 145, *manonia, transligata* p. 146, *pyramidalis* p. 147, *subcastrum, gabina* p. 494, **spp. n.** England Cretaceous, BRYDONE Geol. Mag. **4**.

†*Membraniporidra* **gen. n.** near *Alderina, porrecta* **sp. n.** Carolina Tertiary, CANU & BASSLER Bull. U.S. Nat Mus. **96** p. 21.

†*Membraniporina benjamini* **sp. n.** Georgia Tertiary, CANU & BASSLER *t.c.* p. 11.

†*Membrendoecium* **gen. n.** *Electrinidae, pyriforme,* U.S. Tertiary, CANU & BASSLER *T.c.* p. 17.

†*Meniscopora irregularis* **sp. n.** France Aquitanian, CANU Bull Soc. géol. **15** 1916 p. 330.

†*Mesoseces* **gen. n.** Membraniporidae p. 67, for *simplex* **sp. n.** Spain Tertiary p. 68, FAURA Y SANS & CANU Treb. Inst. Catalana **1916** [1917].

†*Metracolposa* **gen. n.** *Cribrilinidae* p. 34, for *robusta* **sp. n.** Carolina Tertiary p. 35, CANU & BASSLER Bull U.S. Nat. Mus. **96**.

†*Metradolium* **gen. n.** *Stomachetosellidae* p. 47, for *dissimilis* **sp. n.** U.S. Tertiary p. 48, CANU & BASSLER *T.c.*

†*Metrocrypta* **gen. n.** *Stomachetosellidae* for *bucculenta* **sp. n.** Carolina Tertiary, CANU & BASSLER *T.c.* p. 49.

†*Metroperiella* **gen. n.** type *Schizoporella lepralioides* p. 40, *biplanata* **sp. n.** Carolina Tertiary p. 41, CANU & BASSLER *T.c.*

†*Mucronella obesa* **sp. n.** Spain Tertiary, FAURA Y SANS & CANU Treb. Inst. Catalana **1916** p. 94.

Mucronella abyssicola, labiata, LEVINSEN **22**.

†*Ochetosella* **gen. n.** *Stomachetosellidae* p. 49, for *jacksonica* **sp. n.** U.S. Tertiary p. 50, CANU & BASSLER Bull U.S. Nat. Mus. **96**.

†*Odontionella* **gen. n.** type *Membranipora hians,* CANU & BASSLER *T.c.* p. 12.

†*Ogivalina* **gen. n.** *Electrinidae* p. 16, for *eximipora* **sp. n.** U.S. Tertiary p. 17, CANU & BASSLER *T.c.*

†*Onychocella parvipora* **sp. n.** Spain Tertiary, FAURA Y SANS & CANU Treb. Inst. Catalana **1916** p. 72.

†*Otionella* **gen. n.** *Electrinidae* for *perforata* **sp. n.** U.S. Tertiary, CANU & BASSLER Bull U.S. Nat. Mus. **96** p. 13.

†*Palmicellaria luteciana* **sp. n.** Spain Tertiary, CANU Butll. Inst. Catalana **10** 1913 p. 105.

Paludicella elongata Leidy p. 29, *pentagonalis* **sp. n.** Siam p. 30, ANNANDALE Mem. Asiatic Soc. Bengal **6** 1916.

†*Perigastrella* **gen. n.** *Phylactellidae, ovoidea* **sp. n.** U.S. Tertiary, CANU & BASSLER Bull U.S. Nat. Mus. **96** p. 68.

†*Periporosella* **gen. n.** *Electrinidae* p. 18, for *tantilla* **sp. n.** Carolina Tertiary p. 19, CANU & BASSLER *T.c.*

†*Phractoporella* **nom. n.** for *Phractopora* Lang *non* Hall, LANG Geol. Mag. **4** p. 172.

Phylactella collaris var. n. *aviculifera* Tortugas Is., OSBURN Papers Tortugas Lab. **5** 1914 p. 213.

†*Phylactella infundibulum* **sp. n.** Carolina Tertiary, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 67.

†*Phylactellidae* **fam. n.** for *Phylactella* and allies, CANU & BASSLER *T.c.* p. 66.

†*Plagiosmittia* **gen. n.** *Smittinidae* for *regularis* **sp. n.** U.S. Tertiary, CANU & BASSLER *T.c.* p. 51.

Plumatella, Canadian species, WHITE **31**.

†*Porella capitata* **sp. n.** Spain Tertiary, FAURA Y SANS & CANU Treb. Inst. Catalana **1916** p. 95.

Porella fragilis **sp. n.** Greenland, LEVINSEN Medd. Groenl. **43** 1917 p. 464.

Porinula **gen. n.** [for *Porina tubulosa*?], LEVINSEN Medd. Groenl. **43** p. 454. [Acc. to CANU, Revue crit. paléozool., *Porinula*=*Cylindroporella*].

†*Radiofascigera flabellata* **sp. n.** France Burdigalian, CANU Bull. Soc. géol. **16** p. 150.

Rectonychocella **gen. n.** type *Onychocella solida,* CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 25.

†*Rhamphostomella bioculata* **sp. n.** France Tertiary, CANU Bull. Soc. géol. **16** p. 145.

Rhamphostomella spinigera, LEVINSEN **22**.

Rhynchozoon tuberculatum p. 200, *solidum* p. 201, **spp. n.** Tortugas Is., OSBURN Papers Tortugas Lab. **5** 1914.

†*Schizaropsis* **gen. n.** *Galeopsidae* for *convexa* **sp. n.** Mississippi Tertiary, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 57.

Schizellozoon **gen. n.** type *Retepora imperati*, CANU & BASSLER *T.c.* p. 55.

†*Schizemiella* **gen. n.** *Stomachetosellidae* for *claibornica* **sp. n.** Alabama Tertiary, CANU & BASSLER *T.c.* p. 47.

†*Schizobathysella* **gen. n.** *Phylactellidae* p. 69, for *saccifera* **sp. n.** Carolina Tertiary p. 70, CANU & BASSLER *T.c.*

†*Schizomavella* **gen. n.** type *Lepralia auriculata*, CANU & BASSLER *T.c.* p. 40.

†*Schizopodrella* **gen. n.** type *Lepralia unicornis*, CANU & BASSLER *T.c.* p. 40.

Schizoporella floridana **sp. n.** Tortugas Is., OSBURN Papers Tortugas Lab. **5** 1914 p. 205.—*S. vulgaris, unicornis*, LEVINSEN **22**.

Schizorthosecos **gen. n.** *Conescharellinidae*, type *Orbitolites interstitia*, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 74.

Scrupocellaria scabra, LEVINSEN **22**.

†*Semihaswellia* **gen. n.** type *Porina proboscidea*, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 58.

†*Stamenocella* **gen. n.** *Electrinidae* p. 21, for *mediaviculifera* **sp. n.** Georgia Tertiary p. 22, CANU & BASSLER *T.c.*

†*Steganoporella cavatura* p. 323, *brevis* p. 324, **spp. n.** France Aquitanian, CANU Bull. Soc. géol. **15** 1916.

Stephanosella† **gen. n.** type *Lepralia biaperta*, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 40.

†*Stomachetosella* **gen. n.** for *crassicollis* **sp. n.** Alabama Tertiary, CANU & BASSLER, *T.c.* p. 45.

†*Stomachetosellidae* **fam. n.** near *Smittinidae*, for several new Tertiary genera, CANU & BASSLER *T.c.* p. 44.

†*Thalamoporella elongata* **sp. n.** France Tertiary, CANU Bull. Soc. géol. **16** p. 140.

†*Trematoichos* **gen. n.** *Galeopsidae* for *rectifurcatum* **sp. n.** U.S. Tertiary, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 59.

Triphyllozoon **gen. n.** type *Retepora moniliferum*, CANU & BASSLER *T.c.* p. 56.

Triticella pedicellata, ANNANDALE **1**.

†*Tubucella* **gen. n.** near *Tubucellaria* p. 62, *monilifera* **sp. n.** Carolina Tertiary p. 63, CANU & BASSLER Bull. U.S. Nat. Mus. **96**.

Tubulipora misakiensis p. 346, *radiata* p. 348 **spp. n.** Japan, OKADA Annot. Zool. Japan. **9**.

†*Tylopora* **gen. n.** *Cheilostomata, ligatrix* p. 257, *rowei, lorea* p. 258, **spp. n.** England Cretaceous, LANG Geol. Mag. 4.

†*Velumella* **gen n.** near *Onychocella* for *levinseni* **sp. n.** (*Onych.* sp., Levinsen 1909), CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 26.

†*Vetofistula* **gen. n.** *Rhabdomesontidae* for *mirabilis* **sp. n.** Queensland Devonian, ETHERIDGE Geol. Surv. Queensland **260** p. 20.

†*Vibracellina* **gen. n.** *Electrinidae* for *capillaria* **sp. n.** Texas Tertiary, CANU & BASSLER Bull. U.S. Nat. Mus. **96** p. 14.

VIII. MOLLUSCA

ARRANGED BY

M. CONNOLLY.

CONTENTS

	PAGE
I. Titles	5
II. Subject Index :—	
General = 2203 :—	
Historical	25
Biography	
Bibliography	
General Treatises and Works of Reference	
Local Lists*	
Museums, Collections, Expeditions	
Nomenclature	
Technique	
Miscellanea...	
Structure = 2207 :—	
General	25
Nervous System	
Glands	
Shell	
Muscular System	
Alimentary System, Radula and Jaws	
Excretory Organs	26
Reproductive Organs	
Sense Organs	
Physiology = 2211 :—	
General	26
Glandular Secretions, Pigments	
Digestive Organs	
Respiratory Organs	
Vascular System	
Muscular System	
Environmental Effects	

* Under this heading are included nominal rolls of local fauna, containing no note of sufficient importance for inclusion in the Systematic Index.

PAGE

Development = 2215 :—

General ... ... } 26
Oogenesis and Ovum ... ... } 26
Spermatogenesis and Spermatozoon ... ... } 26
Embryology ... ... } 26

Ethology = 2219 :—

General ... ... } 26
Movements, Locomotion ... ... } 26
Enemies, Defence and Protection ... ... } 26
Feeding Habits ... ... } 26
Breeding Habits ... ... } 26
Coloration ... ... } 26
Habitat ... ... } 26
Boring and Burrowing Habits ... ... } 26
Acclimatisation, etc. ... ... } 26
Hibernation and Æstivation ... ... } 26
Parasitism, Commensalism, Parasites, etc. ... ... } 26
Evolution ... ... } 26
Sexual Dimorphism ... ... } 26
Economics ... ... } 26

Variation and Ætiology = 2223 :—

General Treatises ... ... } 27
Teratology, Phylogeny and Relationship ... ... } 27
Evolution ... ... } 27

Distribution = 2227 :—

General 27

(a) Recent :—

(a) Marine :—

Arctic Ocean ... ... } 27
North Atlantic Ocean, Caribbean Sea and Gulf of Mexico ... ... } 27
Mediterranean Sea, Black Sea ... ... } 27
South Atlantic Ocean... ... ... } 27
Indian Ocean, Red Sea ... ... } 27
Malaysia ... ... } 27
Pacific Ocean ... ... } 27
Southern Ocean ... ... } 27
Antarctic Ocean ... ... } 27

PAGE

(β) Non-Marine :—

Denmark = 2227 *da* ... ...
Sweden ... ...
Northern Europe ... ...
Russia and Poland = 2227 *db* ... ... } 27
Germany = 2227 *dc* ... ...
British Islands = 2227 *de* ... ...
France = 2227 *df* ... ...
Spain and Portugal = 2227 *dg* ... ...
Italy, Sardinia, etc. — 2227 *dh* ... ...
Switzerland = 2227 *di* ... ...
Austria-Hungary = 2227 *dk*... ... ...
Balkan Peninsula = 2227 *dl*... ... ...
Mediterranean Islands = 2227 *dm* ... ...
Siberia = 2227 *ea* ... ...
China = 2227 *eb* ... ...
Japan = 2227 *ec* ... ...
Indo-China, etc. = 2227 *ed* ... ...
Siam = 2227 *ee* ... ...
British India, etc. = 2227 *ef* ... ...
Malaysia, Philippine Islands, etc. = 2227 *eg*
Caspian and Aral Seas = 2227 *ek* ... ...
N. Africa = 2227 *fa* ... ... } 28
Sahara, etc. = 2227 *fc* ... ...
W. Africa = 2227 *fd* ... ...
E. and C. Africa, etc. = 2227 *ff* ... ...
S. Africa = 2227 *fg* ... ...
Canada = 2227 *gb* ... ...
United States = 2227 *gf* ... ...
N.E. United States = 2227 *gg* ... ...
S.E. United States = 2227 *gh* ... ...
W. United States = 2227 *gi*... ... ...
Mexico = 2227 *gl* ... ...
Guatemala = 2227 *hb* ... ...
West Indies = 2227 *hc* ... ...
Guiana and Venezuela = 2227 *hd* ... ...
Colombia = 2227 *he* ... ...
Peru = 2227 *hf* ... ...
Brazil = 2227 *hg* ... ...
Argentina, Paraguay and Uruguay = 2227 *hi*
Australia = 2227 *i* ... ...
New Guinea, etc. = 2227 *ia* ... ...
Queensland = 2227 *id* ... ...
New South Wales = 2227 *ie* ... ...
Victoria = 2227 *if* ... ... } 29
S. Australia = 2227 *ig* ... ...
W. Australia = 2227 *ih* ... ...
Tasmania, etc. = 2227 *ii* ... ...
Atlantic = 2227 *la* ... ...
Indian Ocean = 2227 *m* ... ...
Pacific = 2227 *n* ... ...

PAGE

(b) Fossil:—

Quaternary ... ...
Cainozoic ... ...
Pleistocene ... ...
Tertiary ... ... } 29
Pliocene ... ...
Miocene ... ...
Oligocene ... ...
Eocene ... ...
Cretaceous ... ...
Jurassic ... ...
Triassic and Liassic ... ...
Carboniferous ... ...
Devonian ... ... } 30
Silurian ... ...
Ordovician ... ...
Cambrian ... ...

III. Systematic Index = 2231:—

Gastropoda ... ...
Amphineura ... ...
Aplacophora ... ... } 30
Polyplacophora ... ...
Prosobranchia ... ...
Opisthobranchia, including Pteropoda and Heteropoda... 43
Pulmonata 44

Scaphopoda 50

Pelecypoda or Lamellibranchia 50

Cephalopoda 57

I.—TITLES.

A., J. C. Malacological report. Marlborough Coll. Rept. Nat. Soc. **65** 1916 (1917) (40–41). **1**

Allen, H. A. Note on the chalk marl fossils collected from the cutting slope above Martello Tunnel, Folkestone [in Osman **338**]. London Proc. Geol. Ass. **28** 1917 (82–84). **2**

Andrusov, N. I. Послѣтретичныя морскія отложенія Усинопа. [A post-Tertiary marine alluvial deposit at Sinopa.] Petrograd Bull. Acad. Sci. **1917** 1917 (453–454). **3**

Andrusov, N. I. Объ образѣ Жизни *Adacna plicata* Eichw. [On the life habits of *A. plicata* Eichw.] Petrograd Bull. Acad. Sci. **1917** 1917 (457–458). **4**

Ankert, H. Schnecken im Winter. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (140–142). **5**

Ankert, H. Anton Schmidt. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (152–153). **6**

[ANON.] Liste des publications scientifiques d'Henri Fischer. J. conchyliol. Paris **62** 1916 (1917) (187–196). **7**

[ANON.] William Bullock Clark. Nautilus Boston Mass. **31** 1917 (68–69). **8**

Arcy, L. B. The influence of light and temperature upon the migration of *Planorbis trivolvis*. Wiskar Inst. J. Compar. Neurol. Philadelphia Pa. **26** 1916 (359–390). **9**

Bagchus, D. New records for Glamorgan. J. Conch. Leeds **15** 1917 (194). **10**

Baker, F. C. The relation of mollusks to fish in Oneida Lake. Syracuse N.Y. Syracuse Univ. N.Y. State Coll. Forestry Tech. Pub. **4** 1916 (1–366). **11**

Baker, F. C. Notes on *Acella haldemani* (Desh.) Binney. Nautilus Boston Mass. **30** 1917 (135–138). **12**

Baker, F. C. A mollusk injurious to garden vegetables. Science New York **43** 1916 (136). **12a**

Bartsch, P. Pirates of the deep—Stories of the squid and octopus. Washington D.C. Smithsonian Inst. Ann. Rept. **1916** (1917) (347–375) pls. i–xix. **13**

Bartsch, P. Descriptions of new West American marine mollusks and notes on previously described forms. Washington D.C. Smithsonian Inst. U. S. Nation. Mus. Proc. **52** 1917 (637–681) pls. xlii–xlvii. **14**

Bartsch, P. A monograph of West American Melanellid mollusks. Washington D.C. Smithsonian Inst. U.S. Nation. Mus. Proc. **53** 1917 (295–356) pls. xxxiv–xlix. **15**

Bartsch, P. The Philippine land shells of the genus *Amphidromus*. Washington D.C. Smithsonian Inst. U. S. Nation. Mus. Bull. **100** 1917 (1–47) pls. i–xxii. **16**

Bartsch, P. The status of the genus *Subularia* Monterosato. Nautilus Boston Mass. **30** 1917 (133–134) pl. v. **17**

Bartsch, P. A correction. Nautilus Boston Mass. **31** 1917 (71–72). **18**

Bartsch, P. *vide* Dall, W. H.

Bavay, A. Sables coquilliers marins pour le Laboratoire de Malacologie. Paris Bull. Mus. Hist. Nat. **22** 1916 (446–448). **19**

Bavay, A. Quelques coquilles des sables littoraux de divers pays. J. conchyliol. Paris **63** 1917 (91–114) pls. ii–iii. **20**

Becker, J. G. A preliminary note on an intermediate host of *Bilharzia haematobium* in the Transvaal, together with a description of the *Cercariae* with which the mollusc is affected. Med. J. South Africa Johannesburg **11** 1916 (156) 1 pl. **21**

Becker, J. G. A further note on Bilharziosis in the Transvaal. Med. J. South Africa Johannesburg **12** 1916 (42). **22**

Bell, A. A list of type and figured specimens n the geological gallery, Ipswich Museum. Ipswich Field Club J. **5** 1916 (1917) (41–49). **23**

Bell, A. The shells of the Holderness Basement clays. Naturalist London **1917** 1917 (95–98 135–138). **24**

Bell, A. The fossils of the East Anglian Sub-Crag boxstones. Geol. Mag. London (6) **4** 1917 (407–422). **25**

Berry, S. S. The octopod *Ocythoe* in California. Claremont Cal. Pomona Coll. J. Entom. Zool. **8** 1916 (1–4). **26**

Berry, S. S. Australian Antarctic Expedition, 1911–1914. Scientific reports. Ser. C: Zoology and Botany. **4** pt. 2 *Cephalopoda.* Government Printer Adelaide S. Australia 1916 (1–39) pls. x–xiv. **27**

Berry S. S. Chitons taken by the United States Fisheries steamer "Albatross" in the Northwest Pacific in 1906. Washington D.C. Smithsonian Inst. U. S. Nation. Mus. Proc. **54** 1917 (1–18) pls. i–x. **28**

Berry, S. S. Notes on West American Chitons, I. San Francisco Proc. Calif. Acad. Sci. (4) **7** 1917 (229–248). **29**

Berry, S. S. Random notes on the collection and preservation of Chitons. Lorquinia Los Angeles Cal. **1** 1917 (73–76). **30**

Berry, S. S. On *Moschites verrucosa* (Verrill) and its allies. Philadelphia Pa. Proc. Acad. Nat. Sci. **69** 1917 (2–6) pls. i–ii. **31**

Berry, S. S. A new *Sonarella* from Arizona. Nautilus Boston Mass. **31** 1917 (14–15). **32**

Bigelow, H. B. Explorations of the coast water between Cape Cod and Halifax, in 1914 and 1915, by the U.S. Fisheries schooner "Grampus." Oceanography and Plankton. Bigelow Bull. Mus. Comp. Zool. Harvard Coll. **61** 1917 (163–357) pl. i. [*Pteropoda* and *Heteropoda* (298–302).] **33**

Blake, J. H. *Astarte quadrans* as food for flounders. Nautilus Boston Mass. **30** 1917 (132). **34**

Blaney, D. and **Loomis, F. B.** A Pleistocene locality in Mt. Desert Island, Maine. Amer. J. Sci. New Haven Conn. **42** 1916 (399–401). **35**

Bloomer, H. H. and **Overton, H.** On *Anodonta cygnæa* (Linn.) contrasted with *Anodonta anatina* (Linn.); and on *Pseudanodonta rothomagensis*, Locard. London Proc. Malac. Soc. **12** 1917 (202–210) pl. xi. **36**

Böhm, J. Über die Gattungen *Eriphyla* Gabb, *Dozyia* Bosquet und *Freia* Joh. Böhm. Berlin Zeitschr. deutsch. Geol. Ges. B. Monatsb. **69** 1917 (20–30). **37**

Boettger, C. R. Diagnose einer neuen Landschneckenart der Gattung *Curvella* Chaper aus Deutsch-Ost-Afrika. Frankfurt am Main Nachr.-Bl. D. malak. Ges **49** 1917 (124–126). **38**

Boettger, C. R. Otto le Roi. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (145–151). **39**

Bofill i Poch, A. Instruccions per a la recollecció de molluscs terrestres i d'aigua dolça. Barcelona Mus. Sci. Nat. Op. Zool. **5** 1917 (1–17) **40**

Bolam, G. A rare pond-snail (*Limnaea auricularia* L.). The Vasculum, Sunderland **3** 1917 (56–57). **41**

Bonnevie, K. Mitteilungen über Pteropoden. I. Beobachtungen über den Geschlechtsapparat von *Cuvierina columnella* Rang. Jenäische Zeitschr. Naturw. Jena **54** 1916 (245–276) pls. xviii–xxii. **42**

Boswell, P. G. H. The statigraphy and petrology of the Lower Eocene deposits of the north-eastern part of the London Basin. London Q. J. Geol. Soc. **71** 1916 (536–588). [Lists of fossils on pp. 566 & 569.] **43**

Bottazzi, F. Ricerche sulla ghiandola salivare posteriore dei Cefalopodi. Napoli Publ. Staz. Zool. Milano **1** 1916 (59–146). **44**

Boury, E. de. Revision critique de l'étude des Scalaires faite par M. Cossmann dans les "Essais de Paléoconchologie." J. Conchyliol. Paris. **63** 1917 (13–62). **45**

Bowell, E. W. Larva of a Dipterous fly feeding on *Helicella itala*. London Proc. Malac. Soc. **12** 1917 (308). **46**

Bowell, E. W. On an abnormal specimen of *Cochlicopa lubrica*. London Proc. Malac. Soc. **12** 1917 (312–314). **47**

Bowell, E. W. *vide* Kennard, A. S. and Woodward, B. B.

Boycott, A. E. On sexual characters in the shell and radula of *Pomatias elegans* (Müller). London Proc. Malac. Soc. **12** 1917 (127–132). **48**

Boycott A. E. The genitalia of *Acanthinula aculeata*. London Proc. Malac. Soc. **12** 1917 (221–226). **49**

Boycott, A. E. *Paludestrina jenkinsi* at Elstree. Watford Trans. Herts. N. H. Soc. **16** 1917 (276). **50**

Boycott, A. E. Note on the sexes of *Bythinia*. Lancs. and Chesh. Nat. Darwen **10** 1917 (72–73). **51**

Boycott, A. E. The "*Nerita jaculator*" of O. F. Müller and *Paludestrina*. J. Conch. Leeds **15** 1917 (149). **52**

Boycott, A. E. Preliminary note on the genitalia of *Acanthinula lamellata* Jeff. J. Conch. Leeds **15** 1917 (175–178). **53**

Boycott, A. E. Where is the male of *Paludestrina jenkinsi*? J. Conch. Leeds **15** 1917 (216). **54**

Boycott, A. E. On the occurrence of manganese in land and fresh water mollusca. Naturalist London **1917** 1917 (11–18 69–73). **55**

Boycott, A. E. *vide* Kennard, A. S. and Woodward, B. B.

Brown, A. *vide* Pilsbry, H. A.

Brun, P. de. Le barrémien supérieur à faciès urgonien de Brouzet-les-Alais (Gard). Pt. II. Complément de l'étude paléontologique des gisements de Brouzet. Mollusques (Céphalopodes). Paris Mem. Soc. Geol. France Paléontol. **21** 1916 No. 51 (44–47) pl. xix **56**

Buchner, O. Die Grössenextreme bei unseren einheimischen Land- und Süsswassermollusken. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (167–185) pls. ii–iii. **57**

Bülow, E. N. von. Ein *Haplopleuroceras* von La Verpillière. Berlin Zeitschr. deutsch Geol. Ges. B. Monatsb. **69** 1917 (85–90). **58**

Butterfield, W. R. The marine mollusca of Sussex. Hastings and E. Sussex Nat. Hastings **2** 1917 (231–237). **59**

Carr, J. W. The invertebrate fauna of Nottinghamshire. J. and H. Bell Nottingham **1916** (i–viii 1–618) [Mollusca pp. 20–51.] **60**

Carter, C. S. *Vitrea lucida* at Louth, Lincs. Naturalist London **1917** 1917 (358). **61**

Cate, Margaret L. *Lima dehiscens* at Laguna Beach. Claremont Cal. Pomona Coll. J. Entom. Zool. **8** 1916 (94) 1 pl. **62**

Cawston, F. G. The causes of Bilharziosis. Med. J. South Africa Johannesburg **11** 1916 (125–126 154). **63**

Cawston, F. G. Report on the examination of 1,000 molluscs in Natal. Med. J. South Africa Johannesburg **11** 1916 (197). **64**

Cawston, F. G. The cercarial infection of South African snails. Med. J. South Africa Johannesburg **12** 1917 (183–189). **65**

Cawston, F. G. Schistosomiasis in Natal. J. Trop. Med. Hyg. London **18** 1915 (257–258). **66**

Cawston, F. G. Some observations on the possible intermediary hosts of Schistosoma in Natal. J. Trop. Med. Hyg. London **19** 1916 (154). **67**

Cawston, F. G. The *Cercariae* of Natal. J. Trop. Med. Hyg. London **19** 1916 (201–202). **68**

Cawston, F. G. Prophylaxis in Bilharziasis. J. Trop. Med. Hyg. London **20** 1917 (49–50). **69**

Cawston, F. G. Bilharziosis. Lancet London (2) **1915** 1915 (1427). **70**

Cawston, F. G. The prevention of Bilharzia infection. Lancet London (1) **1916** 1916 (837). **71**

Cawston, F. G. Bilharziosis in Natal. Brit. Med. J. London (2) **1915** 1915 (746). **72**

Cawston, F. G. Bilharziosis in South Africa. S. Afr. Med. Rec. Cape Town **14** 1916 (99–105). **73**

Cawston, F. G. The cause and effect of Bilharzia disease in South Africa, Egypt and the Far East. S. Afr. Med. Rec. Cape Town **14** 1916 (163–164). **74**

Cawston, F. G. Bilharzia Prophylaxis. S. Afr. Med. Rec. Cape Town **15** 1917 (38–39). **75**

Cawston, F. G. Insanitary snails. S. Afr. Med. Rec. Cape Town **15** 1917 (118–119). **76**

Cawston, F. G. Bilharzia in pools. S. Afr. Med. Rec. Cape Town **15** 1917 (313–314). **77**

Cawston, F. G. Snails as intermediary hosts. S. Afr. Med. Rec. Cape Town **15** 1917 (234–236). **78**

Cawston, F. G. The *Cercariae* of Natal. J. Parasitol. Illinois **3** 1917 (131–135). **79**

Caziot, E. Note sur l'*Helix ericetorum* Geoffroy. Paris Bull. Soc. Zool. France **41** 1916 (53–55). **80**

Caziot, E. Sur l'identité des *Helix simplicula* Morelet et *annai* Paladilhe. Paris Bull. Soc. Zool. France **41** 1916 (55–56). **81**

Caziot, E. Note sur les *Campylaea* de la Sardaigne et des iles de Capraia, de Pianosa et de Corse. Paris Bull. Soc. Zool. France **41** 1916 (1917) (65–76). **82**

Caziot, E. *Macularia* de la Sardaigne et de la Corse. Paris Bull. Soc. Zool. France **41** 1916 (1917) (76–85). **83**

Caziot, E. Étude et revision des *Helix* du groupe *pyramidata* des côtes françaises. Paris Bull. Soc. Zool. France **41** 1916 (1917) (100–106). **84**

Caziot, E. Note rectificative aux *Campylaea* de Corse et de Sardaigne. Paris Bull. Soc. Zool. France **42** 1917 (98–99). **85**

Cereceda, J. D. Acerca de la edad sarmatiense de los lignitos de La Alcarria. Madrid Bol. R. Soc. Esp. Hist. Nat. **17** 1917 (170–173). **86**

Chace, E. P. Notes on the variation of *Ischnochiton conspicuus* Cpr. Nautilus Boston Mass. **31** 1917 (37–40). **87**

Chapman, F. and **Gabriel,** C. J. On a shell-bed underlying volcanic tuff near Warrnambool; with notes on the age of the deposit. Melbourne Proc. R. Soc. Victoria (N.S.) **30** 1917 (4–14). **88**

Churchill, E. P. The absorption of nutriment from solution by freshwater mussels. J. Exper. Zool. Philadelphia Pa. **21** 1916 (403–424) 2 pls. **89**

Clapp, G. H. New land shells from Alabama and Arkansas, with note on *Polygyra albolabris* and *P. zaleta*. Nautilus Boston Mass. **30** 1917 (138–140) pl. v figs. 5–7. **90**

Cockerell, T. D. A. Henry Melvill Gwatkin. Nautilus Boston Mass. **30** 1917 (119–120). **91**

Cockerell, T. D. A. *Limax arborum* in a Colorado greenhouse. Nautilus Boston Mass. **30** 1917 (120). **92**

Cockerell, T. D. A. An arboreal *Polygyra*. Nautilus Boston Mass. **31** 1917 (36). **93**

Coëmme, *Mlle.* S. Sur un nouveau procédé de reproduction des cloisons d'ammonoidés. Paris C. R. Acad. sci. **165** 1917 (707–708). **94**

Coen, G. S. Nota sui *Cardium* della sezione *Cerastoderma*. Padova Atti. Acc. sci. Ven.-Trent.-Ist. (3) **8** 1915 (1916) (54–62) pls. i–iv. **95**

Commont, V. Sur les tufs de la vallée de la Somme: tufs de la période historique; tufs néolithiques; tufs quaternaires. Paris C. R. Acad. sci. **164** 1917 (314–318). **96**

Conklin, E. G. Why polar bodies do not develop. Washington D.C. Proc. Nation. Acad. Sci. **1** 1915 (491–496). **97**

Conklin, E. G. Effects of centrifugal force on the structure and development of the eggs of *Crepidula*. J. exper. Zool. Philadelphia Pa. **22** 1917 (311–418) 23 pls. **98**

Contreras, F. Observaciones sobre algunos moluscos del Valle y utilidad que prestan. Mexico Bol. dir. Est. Biol. **2** 1917 (3–6). **99**

Cooke, A. H. *Patella vulgata,* Linnaeus, and its so-called variety, *Patella depressa,* Pennant. London Proc. Malac. Soc. **12** 1917 (135–137). 100

Cooke, A. H. The radula of the genus *Cominella* H. and A. Adams. London Proc. Malac. Soc. **12** 1917 (227–231). 101

Cooke, A. H. A colony of *Nucella* (olim *Purpura*) *lapillus* (Linn.) with operculum malformed or absent. London Proc. Malac. Soc. **12** 1917 (231–232). 102

Cooke, A. H. The radula of the genus *Euthria,* Gray. London Proc. Malac. Soc. **12** 1917 (232–235). 103

Cooke, A. H. The generic position of the genus *Northia* Gray. London Proc. Malac. Soc. **12** 1917 (235–237). 104

Copeland, G. G. The temperature and densities and allied subjects of Passamaquoddy Bay and its environs. Their bearing on the oyster industry. Contrib. Canad. Biol. Ottawa (1906–1910) **1912** 1912 (281–294) pl. xxxvi. 105

Cossmann, M. Le barrémien supérieur à faciès urgonien de Brouzet-les-Alais (Gard). Part. II. Complèment de l'étude paléontologique des gisements de Brouzet. Mollusques (Gastropodes et Pelecypodes). Paris Mem. Soc. Geol. France Paléontol. **21** 1916 No. 51 (10–43) pls. xv–xix. 106

Cossmann, M. and **Peyrot,** A. Conchologie néogenique de l'Aquitaine. Scaphopodes et Gastropodes. (cont.) Bordeaux Actes Soc. linn. **69** 1916 (1917) (285–365). 107

Cox, P. A supposed disease of Quahangs from New Brunswick. Contrib. Canad. Biol. Ottawa (1914–1915) **1916** 1916 (73–79). 108

Crabb, E. D. Note on Texas land snails. Amer. Mus. J. New York N.Y. **17** 1917 (577–578). 109

Craifaleanu, A. D. Studies on the ferments of sea animals. Mollusca. Proteolytic ferments in the liver of *Sepia officinalis.* Napoli Publ. Staz. Zool. Milano **1** 1916 (155–208). 110

Crick, G. C. Note on the type-specimen of *Crioceratites bowerbankii,* J. de C. Sowerby. London Proc. Malac. Soc. **12** 1917 (138–139) pl. vii. 111

Crozier, W. J. The nature of the conical bodies on the mantle of certain Nudibranchs. Nautilus Boston Mass. **30** 1917 (103–106). 112

Crozier, W. J. Some structural variations in *Chromodoris zebra.* Nautilus Boston Mass. **30** 1917 (140–142) pl. vi. 113

Crozier, W. J. A method of preserving large Nudibranchs. Nautilus Boston Mass. **30** 1917 (142–144). 114

Crozier, W. J. On the periodic shoreward migration of tropical Nudibranchs. Amer. Nat. New York N.Y. **51** 1917 (377–382). 115

Crozier, W. J. Fusion of "rhinophores" in *Chromodoris.* Amer. Nat. New York N.Y. **51** 1917 (756–758). 116

Crozier, W. J. Evidence of assortive mating in a Nudibranch. Washington D.C. Proc. Acad. Nat. Sci. **3** 1917 (519–522). 117

Cuénot, L. *Sepia officinalis* est une espèce en voie de dissociation. Arch. Zool. Exper. et Gen. Paris **56** 1917 (315–346). 118

Dacie, J. C. "*Littorina littorea* L.: A Doubtful Record." J. Conch. Leeds **15** 1917 (179–180). 119

Dall, W. H. Summary of the mollusks of the Family *Alectrionidae* of the West Coast of America. Washington D.C. Smithsonian Inst. U.S. Nation. Mus. Proc. **51** 1917 (575–579). 120

Dall, W. H. Notes on the shells of the genus *Epitonium* and its allies of the Pacific Coast of America. Washington D.C. Smithsonian Inst. U.S. Nation. Mus. Proc. **53** 1917 (471–488). 121

Dall, W. H. A new species of *Astarte* from Alaska. Nautilus Boston Mass. **31** 1917 (10–12). 122

Dall, W. H. Notes on boreal land and freshwater shells. Nautilus Boston Mass. **31** 1917 (12–13). 123

Dall, W. H. Mrs. Maria Baldridge. Nautilus Boston Mass. **31** 1917 (34). 124

Dall, W. H. New *Bulimulus* from the Galapagos Islands and Peru. Washington D.C. Proc. Biol. Soc. **30** 1917 (9–11). 125

Dall, W. H. and **Bartsch,** P. Espèces nouvelles de mollusques du littoral canadien de l'Atlantique et de celui du Pacifique. Victoria B.C. Bull. Mus. commemoratif Canada Min. Mines **1913** 1915 (159–167) pl. x. **126**

Dàniels, L. E. *vide* Henderson, J.

Dantan, J. L. La larve de l'*Ostrea edulis.* Ann. Inst. Océan. Paris **7** (6) 1916 (1–20) pls. i–ii. **127**

Dautzenberg, P. Liste des mollusques marins récoltés en 1915–16 par M. Georges Lecointre sur le littoral occidental du Maroc. J. Conchyliol. Paris **63** 1917 (63–70). **128**

Dautzenberg, P. À propos de l' "Universal Conchologist" de Thomas Martyn. J. Conchyliol. Paris **63** 1917 (148–152). **129**

Dautzenberg, P. and **Lamy,** E. Henri Fischer 1865–1916. J. conchyliol. Paris **62** 1916 (1917) (179–187). **130**

Dean, J. D. Land mollusca in the Vale of Glamorgan. Cardiff Nat. Soc. Rept. and Trans. **48** 1915 (1916) (50–58). **131**

Dean, J. D. and **Tomlin,** J. R. le B. On the supposed occurrence of *Jaminia triplicata* Studer in Suffolk. J. Conch. Leeds **15** 1917 (165–167). **132**

Deecke, W. Die Trias der Schweitzer Alpen und damit zusammenhängende Fragen. Centralbl. f. Min. Geol. u. Paläont. Stuttgart **1917** 1917 (5–20). **133**

Depéret, C. and **Gentil,** L. Sur une faune miocène supérieure marine (Sahélienne) dans le R'arb (Maroc occidentale). Paris C. R. Acad. sci. **164** 1917 (21–25). **134**

Depéret, C. and **Joleaud,** L. Les dépôts quaternaires marins de la region de Bône et de La Calle (Algérie). Paris C. R. Acad. sci. **164** 1917 (674–680). **135**

Detweiler, J. D. Preliminary notes on the mollusca of St. Andrews and vicinity, New Brunswick. Contr. Canad. Biol. Ottawa (1911–1914) **1915** 1915 (43–46). **136**

Dickerson, R. E. Climate and its influence upon the Oligocene faunas of the Pacific Coast, with descriptions of some new species from the *Molophorus lincolnensis* zone. San Francisco Proc. Calif. Acad. Sci. (4) **7** 1917 (157–192) pls. xxvii–xxxi. **137**

Dickerson, R. E. Climatic zones of Martinez Eocene time. San Francisco Proc. Calif. Acad. Sci. (4) **7** 1917 (193–196). **138**

Dickerson, R. E. Ancient Panama Canals. San Francisco Proc. Calif. Acad. Sci. (4) **7** 1917 (197–205). **139**

Dickerson, R. E. and **Kew,** W. S. W. The fauna of a medial Tertiary formation and the associated horizons of Northeastern Mexico. San Francisco Proc. Calif. Acad. Sci. (4) **7** 1917 (125–156) [Mollusca (126–129).] **140**

Dickerson, R. E. and **Kew,** W. S. W. Tertiary mollusks and echinoderms from the vicinity of Tuxpan, Mexico. (Abstract.) New York N.Y. Bull. Geol. Soc. Amer. **28** 1917 (224–225). **141**

Diener, C. Ueber eine neue Art des Genus *Gymnites* (*G. spiniger*) aus dem bosnischen Muschelkalk. Centralbl. f. Min. Geol. u. Paläont. Stuttgart **1917** 1917 (110–114). **142**

Doello Jurado, M. Sobre la presencia de *Tellina* "*gibber* Ihering" en Mar del Plata. Physis Rev.-Soc. Argentina Sci. Nat. Buenos Ayres **3** 1917 (82). **143**

Doello Jurado, M. Henri Fischer. Physis Rev. Soc. Argentina Sci. Nat. **3** 1917 (119–120). **144**

Doello Jurado, M. Edgar A. Smith. Physis Rev. Soc. Argentina Sci. Nat. **3** 1917 (120–122). **145**

Doello Jurado, M. Moluscos hallados en un cementerio indigena de las isla de Martin Garcia. Physis Rev. Soc. Argentina Sci. Nat. **3** 1917 (223–225). **146**

Doello Jurado, M. *Monocondylaea orbignyana* n. sp. Physis Rev. Soc. Argentina Sci. Nat. **3** 1917 (260–262). **147**

Doello Jurado, M. Nota sobre *Acanthina calcar* (Martyn). Physis Rev. Soc. Argentina Sci. Nat. **3** 1917 (271–283). **148**

Doello Jurado, M. Nota sobre *Turritella americana* (Bravard). Physis Rev. Soc. Argentina Sci. Nat. **3** 1917 (283–287). **149**

[**Doello Jurado,** M.] Estudio de la fauna marina en las costas de la provincia de Buenos Aires y del Chubut. Physis Rev. Soc. Argentina Sci. Nat. **2** 1916 (195–200). **150**

Douvillé, H. Les terrains secondaires dans le massif du Moghara à l'est de l'isthme de Suez, d'après les explorations de M. Couyat-Barthoux. Paris Mem. Acad. Sci. **54** 1916 (1–184) pls. i–xxi. **151**

Dreyer, L. Nekrolog. Wilhelm Kobelt (20. Februar 1840—26. März 1916). Wiesbaden Jahrb. Nassauischen Ver. Naturk. **69** 1916 (xxviii–xliii). **152**

Eder, L. Eine neue Fruticicolenart aus den Schweizeralpen: *Fruticicola biconica* n. sp. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (119–122). **153**

Eder, L. Eine neue Schweizer Helicide. Rev. Suisse Zool. Genève **25** 1917 (441–452) pl. viii. **154**

Ehrmann, P. Zur Frage der Bestäubung von Blüten durch Schnecken. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (49–75). **155**

Etheridge, R. Mount Wilson Well "Musselband." Sydney N.S.W. Rec. Austral. Mus. **11** 1917 (219–220) pl. xli. **156**

Etheridge, R. Pelecypoda from the Permo-Carboniferous of Bundanoon. Sydney N.S.W. Rec. Austral. Mus. **11** 1917 (222–226) pl. xi. **157**

Evans, W. and **Evans,** W. E. Some Nudibranchs, including *Hermaea dendritica*, and *Lamellidoris aspera*, from the Forth Area. Scott. Nat. Edinburgh **1917** 1917 (105–110). **158**

Faura y Sans, M. Síntesis estratigráfica de los terrenos primarios de Cataluña con una descripcion de los yacimientos fosiliferos más principales. Madrid Mem. R. Soc. espan. Hist. nat. **9** 1913 (1–202) pls. i–ix. **159**

Faust, E. C. Notes on the *Cercariae* of the Bitter Root Valley, Montana. J. Parasitol. Illinois **3** 1917 (105–123). **160**

Ferriss, J. H. A shell hunt in the Black Range, with description of a new *Oreohelix*. Nautilus Boston Mass. **30** 1917 (99–103). **161**

Ferriss, J. H. Collecting shells in a corner of the Sierra Nevada. Nautilus Boston Mass. **31** 1917 (31–34) pl. vii f. 3. **162**

Fischer, K. Die Begattung bei *Limax maximus*. Jenaische Zeitschr. Naturw. Jena **55** 1917 (101–124) pl. v. **163**

Fischer, K. and **Wenz,** W. Die Landschneckenkalke des Mainzer Beckens und ihre Fauna. Wiesbaden Jahrb. Nassau. Ver. Naturk. **67** 1914 (22–154) pls. iv-xi. [I. Stratigraphisches Teil (22–29) by K. Fischer; II. Paläontologisches Teil (30–154) by. W. Wenz.] **164**

Foerste, A. F. The Richmond faunas of Little Bay de Noquette, in Northern Michigan. Ottawa Nat. **31** 1917 (97–103) pls. iv–vi. **165**

Fosse, R. Origine et distribution de l'urée dans la nature. Application de nouvelles méthodes d'analyse de l'urée basées sur l'emploi du xanthydrol. Quatrième partie. Demonstration de la présence de l'urée chez les invertébrés. Paris Ann. Inst. Pasteur **30** 1916 (673–676). **166**

Fourtau, M. R. *vide* Hume, W. F.

Frankenberger, Z. Zur Kenntnis der dalmatinischen *Zonites*-Arten. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (24–27). **167**

Frankenberger, Z. Ueber den Geschlechtsapparat von *Campylaea* (*Liburnica*) *nicolai* Klec. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (126–129). **168**

Freund, L. Die Literatur über die Mollusken Böhmens. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (85–94). **169**

Frierson, L. S. New genera and species of Central American Naiades. Nautilus Boston Mass. **31** 1917 (47–49) pl. vii. **170**

Frierson, L. S. On the rate of growth of pond Unios. Nautilus Boston Mass. **31** 1917 (49–50) pl. vii. **170a**

Fuente, J. M. de la. Enumeracion de las especies zoologicas que han sido descritas por primera vez sobre ejemplares procedentes de la provincia de Ciudad Real. Madrid Bol. R. Soc. Esp. Hist. Nat. **17** 1917 (277–313). [Mollusca (278).] **170b**

Fulton, H. C. Molluscan notes, iii. London Proc. Malac. Soc. **12** 1917 (238–240). **170c**

Fulton, H. C. Description of a new species of Colombian *Trichodiscina* (*T. crinita*). London Proc. Malac. Soc. **12** 1917 (240–241). **170d**

Fulton, H. C. Description of a new species of Siamese *Vivipara* (*V. occulta*). London Proc. Malac. Soc. **12** 1917 (241). **170e**

Gabriel, C. J. *vide* Gatliff, J. H. and Chapman, F.

Galaine, C. *vide* Houlbert, C.

Gardiner, A. Notes on some shell beaches and rare Cornish marine shells. J. Conch. Leeds **15** 1917 (167). **170f**

Gardiner, C. I. The Silurian inlier of Usk. Gloucester Proc. Cotteswold Nat. F.C. **19** 1916 (1917) (129–172) Palæontological Appendix by F. R. C. Reed (160–172) pls. vii–viii. **171**

Gatenby, J. B. The cytoplasmic inclusions of the germ-cells. Q. J. Microscop. Sci. London **62** 1917 (555–611) pls. xxix–xxxiv. **172**

Gatliff, J. H. and **Gabriel,** C. J. Additions to and alterations in the catalogue of the marine shells of Victoria. Melbourne Proc. R. Soc. Victoria (N.S.) **30** 1917 (21–31) pl. iii. **173**

Gentil, L. Sur la Miocène supérieure marin (Sahélien) de l'Ouest Algérien. Paris C. R. Acad. sci. **164** 1917 (357–360). **174**

Gentil, L. *vide* Depéret, C.

Germain, L. Contributions à la faune malacologique le l'Afrique équatoriale. xliv. Mollusques terrestres recueillis dans les provinces de Kilwa et de Mahenge. Paris Bull. Mus. Hist. nat. **1916** 1916 (243–259). **175**

Germain, L. Contributions à la faune malacologique de l'Afrique équatoriale. xlv. Sur le genre *Leroya* Bourguignat [famille des *Ampullariidae*] [genre *Lanistes* Denys de Montfort, sous-genre *Leroya* Bourguignat]. Paris Bull. Soc. Hist. nat. **1916** 1916 (317–329). **176**

Germain, L. Contributions à la faune malacologique de l'Afrique équatoriale. xlvi. Sur quelques mollusques du Sahara et du Soudan. Paris Bull. Mus. Hist. nat. **1917** 1917 (494–510). **177**

Germain, L. Contributions à la faune malacologique de l'Afrique équatoriale. xlvii. Mollusques recueillis au Dahomey par M. Henry Hubert. Paris Bull. Mus. Hist. nat. **1917** 1917 (511–520). **178**

Germain, L. Contributions à la faune malacologique de l'Afrique équatoriale. xlviii. Deux gasteropodes fluviatiles nouveaux du bassin du Sénégal. (Mission R. Chudeau, 1916.) Paris Bull. Mus. Hist. nat. **1917** 1917 (521–529) pl. vii. **179**

Germain, L. Sur les collections malacologiques réunies par M. J. de Morgan pendant ses voyages en Asie antérieure. Paris Bull. Mus. Hist. nat. **1917** 1917 (530–532). **180**

Germain, L. L'origine et la distribution géographique des faunes d'eau douce de l'Amérique du Nord. Ann. Géogr. Paris **23-24** 1914–1915 (1915) (394–406). **181**

Germain, L. L'étang de Berre, d'après Mr. A. Chevallier. Ann. Géogr. Paris **26** 1917 (329–343). **182**

Germain, L. Seconde notice malacologique. Docs. sci. Mission Tilho Paris **1916** 1916 (285–322) pl. i. **183**

Germain, L. Étude sur les mollusques terrestres et fluviatiles recueillis par L. Fea pendant son voyage en Afrique occidentale et aux îles du golfe de Guinée. Genova Ann. Mus. Civ. Stor. Nat. (3) **7** 1916 (150–337) pls. vi–x. **184**

Gester, G. C. Geology of a portion of the McKittrick district, a typical example of the west side San Joaquin Valley oil fields, and a correlation of the oil sands of the west side fields. San Francisco Proc. Calif. Acad. Sci. (4) **7** 1917 (207–227) pls. xxxii–xxxiii. **185**

Geyer, D. Zur Molluskenfauna Polens. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (80–85). **186**

Geyer, D. Zur Molluskenfauna des Urwaldes von Bialowies (Bjelowjesh). Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (97–109). **187**

Geyer, D. Anhang: Zur Molluskenfauna des Niemengebietes. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (109–111). **188**

Gigoux, E. E. "El *Monoceros crassilabrum.*" Rev. Chilena Hist. Nat. Santiago **20** 1916 (11–13). **189**

Gilmore, R. J. Notes on reproduction and growth in certain viviparous mussels of the Family *Sphaeriidae.* Nautilus Boston Mass. **31** 1917 (16–30) pls. iv–vi. **190**

Girty, G. H. Some characters of the apical end of *Pseudorthoceras knoxense* McChesney. Amer. J. Sci. Newhaven Conn. **42** 1916 (387–388) pl. i. **191**

Godwin-Austen, H. H. The land mollusca collected on the Island of Barkuda in the Chilka Lake, Ganjam. Calcutta Rec. Ind. Mus. **13** 1917 (349–351). **192**

Göthlin, G. F. Die doppelbrechenden Eigenschaften des Nervengewebes. Ihre Ursachen und ihre biologischen Konsequenzen. Stockholm Svensk. Vet. Akad. Handl. **51** (1) 1913 (1–92) 3 pls. **193**

Goldschmidt, R. The function of the apyrene spermatozoa. Science New York N.Y. **44** 1916 (544–546). **194**

Goldsmith, Marie. Psychologie animale. Quelques réactions sensorielles chez le poulpe. Paris C. R. Acad. Sci. **164** 1917 (448–450). **195**

Goodrich, C. *Pleurocera subulare* Lea. Nautilus Boston Mass. **30** 1917 (122–124). **196**

Gould, H. N. Studies on sex in the hermaphrodite mollusc *Crepidula plana.* I. History of the sexual cycle. J. Exper. Zool. Philadelphia Pa. **23** 1917 (1–68) 8 pls. **197**

Gould, H. N. Studies on sex in the hermaphrodite mollusc *Crepidula plana.* II. Influence of environment on sex. J. exper. Zool. Philadelphia Pa. **23** 1917 (225–250). **198**

Grabau, A. W. Comparison of American and European Lower Ordovicic formations. Washington D.C. Bull. Geol. Soc. Amer. **27** 1916 (555–622). **199**

Greger, D. K. A color-marked *Euconospira* from the Pennsylvanian of Missouri, and a list of references to coloration in fossil shells. Nautilus Boston Mass. **30** 1917 (114–117) pl. iii. **200**

Gripp, K. Über das marine Altmiocän im Nordseebecken. Neu. Jahrb. Min. Geol. Pal. Stuttgart Beil.-Bd. **41** (1) 1916 (1–59) pls. i–ii. **201**

Gude, G. K. Diagnoses of four undescribed Helicoids from Borneo and Guam (Ladrones). London Proc. Malac. Soc. **12** 1917 (315–317). **202**

Haas, F. Estudios sobre las Náyades del Ebro. Zaragoza Bol. Soc. Aragon. Ci. Nat. **16** 1917 (71–79). **203**

Haas, F. Estudio para una monographia de las Náyades de la Peninsula Ibérica. Barcelona Junta Ci. Nat. **2** 1917 (131–190). **204**

Haas, F. Consideraciones sobre los medios y fines de la investigación zoogeografica. Barcelona Mus. Sci. Nat. Op. Zool. **6** 1917 (1–58). **205**

Hadden, N. G. Hibernation of *Succinea elegans* Risso. J. Conch. Leeds **15** 1917 (216). **206**

Hadden, N. G. Notes on some North Devon Mollusca. J. Conch. Leeds **15** 1917 (220). **207**

Heath, H. The anatomy of an Eolid, *Chioraera dalli.* Philadelphia Pa. Proc. Acad. Nat. Sci. **69** 1917 (137–148) pls. xi-xiii. **208**

Hedley, C. Studies on Australian Mollusca, part 13. Sydney N.S.W. Proc. Linn. Soc. N. S. Wales **41** 1916 (1917) (680–719) plls. xlvi–lii. **209**

Hedley, C. Notes on the Victorian species of *Bullinus.* Sydney N.S.W. Rec. Austral. Mus. **12** 1917 (1–8) pl. i–ii. **210**

Hedley, C. Description of a new shell from Caloundra. Brisbane Proc. R. Soc. Queensland **29** 1917 (55–56). **211**

Hedley, C. The Economics of *Trochus niloticus.* Austral. Zool. Sydney N.S.W. **1** 1917 (69–73) pls. iv–v. **212**

Hedley, C. Has *Lymnœa* an Auriculoid ancestry? London Proc. Malac. Soc. **12** 1917 (125–126). **213**

Hedley, C. Notes on operculum evolution. Nautilus Boston Mass. **30** 1917 (97–99). **214**

Hedley, C. Report on mollusca from elevated marine beds, "Raised Beaches," of McMurdo Sound. Australian Antarctic Expedition 1911–1914. Under the leadership of Sir

Douglas Mawson, D.Sc., B.E. Scientific Reports. Geology. **2** (5). 1917 (85–88). **215**

Heilbronn, L. V. Maturation and initiation of development in *Cumingia*. Anat. Record Philadelphia Pa. **11** 1917 (362). **216**

Henderson, J. A new pleistocene mollusk locality in New Mexico. Nautilus Boston Mass. **30** 1917 (134–135). **217**

Henderson, Jno. B. Collecting days about the naval station, Guantanamo Bay, Cuba. Nautilus Boston Mass. **31** 1917 (41–44). **218**

Henderson, J. and **Daniels,** L. E. Hunting mollusca in Utah and Idaho in 1916. Philadelphia Pa. Proc. Acad. Nat. Sci. **69** 1917 (48–81). **219**

Herold, S. C. Tertiary *Nassidae* of the West Coast of America. (Abstract) New York N. Y. Bull. Geol. Soc. Amer. **28** 1917 (227). **220**

Heron-Allen, E. Presidential Address, 1916–1917: Alcide d'Orbigny, his life and his work. London J. R. Microscop. Soc. **1917** 1917 (1–105 433–434) pls. i–xiii. **221**

Hesse, P. Nekrolog [Dr. R. Schröder]. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (41–44). **222**

Hesse, P. Kritische Fragmente. XVII. Nochmals Nomenklaturfragen. XVIII. Ein neues Subgenus von *Acme*. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (122–124). **223**

Hidalgo, J. G. Fauna malacologica de España Portugal y las Baleares. Moluscos testaceos marinos. Madrid Mus. Nac. Ci. Nat. Trab. Ser. Zool. **30** 1917 (1–752). **224**

Hilber, V. Das Geschlecht der Gattungsnamen auf *ites*. Centralbl. Min. Geol. Paläont. Stuttgart **1917** 1917 (310). **225**

Hilbert, R. Die molluskenfauna der Rokitnosümpfe. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (75–80). **226**

Hilbert, R. *Planorbis corneus* var. *praetexta*. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (189–190) **227**

Hirase, Y. *Terebridae* of the Japanese Empire. Kyoto Hirase Conch. Mus. **1917** 1917 (1–50) pls. i–viii. **228**

Holmquist, E. Fund von *Helicella ericetorum* Müll. in Schweden. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (140). **229**

Honigmann, H. L. Über einige Anodonten und Unionen aus Rumänien. Magdeburg Abh. u. Ber. Mus. Nat. Heimatk. **2** 1914 (1–9) pls. i–iv. **230**

Hornell, J. The edible molluscs of the Madras Presidency. Madras Fish. Dept. Bull. **11** 1917 (1–51). **231**

Houlbert, C. and **Galaine,** C. Sur le chambrage des huitres et sur l'infection possible des chambres par le fait d'une annélide tubicole parasite de la coquille. Paris C. R. Acad. Sci. **162** 1916 (54–56). **232**

Hume, W. F. Report on the oilfields region of Egypt. Egypt Surv. Dept. Cairo **1916** 1916 (i–viii 1–103) pls. i–xxiii. [Report on Mollusca by **Fourtau,** M.R. (90–94)]. **233**

Huntze, H. Über das ständige Auftreten bestimmter Zellelemente im Centralnervensystem von *Helix pomatia* L. Ein Beitrag zur Frage nach der Konstanz histologischer Elemente. Zool. Anz. Leipsig **49** 1917 (123–137). **234**

Hyning, T. van. The distinctive characters of *Lampsilis minor* and *L. villosa*. Nautilus Boston Mass. **31** 1917 (15–16). **235**

Ihering, H. von. Dr. Wilhelm Kobelt. Physis Rev. Soc. Argentina Sci. Nat. Buenos Ayres **3** 1917 (106–107) **236**

Ihering, H. von. *Loboa brunoi* n.g., n.sp., a land shell from the Brazilian island of Trinity. Nautilus Boston Mass. **30** 1917 (121–122) pl. iv, f. 7. **237**

Iredale, T. More molluscan name changes, generic and specific. London Proc. Malac. Soc. **12** 1917 (322–330). **238**

Iredale, T. On some new species of marine mollusca from Christmas Island, Indian Ocean. London Proc. Malac. Soc. **12** 1917 (331–334) pl. xiii. **239**

Iredale, T. and **Tomlin,** J. R. le B. *Lienardia mighelsi* nom. n. J. Conch. Leeds **15** 1917 (216). **240**

Jackson, J. W. The geographical distribution of the use of pearls and pearl-shell. Manchester Mem. Lit. Phil. Soc. **60** (12) 1916 (1–53). **241**

Jackson, J. W. The use of cowry-shells for the purposes of currency, amulets and charms. Manchester Mem. Lit. Phil. Soc. **60** (13) 1916 (1–72). **242**

Jackson, J. W. *Helicella virgata* (Da Costa) in Wirral, Cheshire. J. Conch. Leeds **15** 1917 (203). **243**

Jackson, J. W. Shells as evidence of the migration of early culture. Manchester University Pub. Ethnology Series **2** 1917 (i–xxviii 1–216) 3 pls. **243a**

Jaworski, E. Beiträge zur Geologie und Paläontologie von Südamerika. XXIII. Beiträge zur Kenntniss des Jura in Süd-Amerika. Teil II, Spezieller, paläontologischer Teil. Neu. Jahrb. Min. Geol. Paläont. Stuttgart Beil. Bd. **40** 1915 (364–456) pls. v–viii. **244**

Jewell, Minna E. *vide* Lewis, H. B.

Johansen, A. C. En fremmed Snegl i Randers Fjord. Dansk Fiskeritidende København **1917** 1917 (501–502). [Not seen by recorder.] **245**

Johansen, A. C. and **Lynge,** H. Om Land-og Ferskvandsmolluskerne i holocæne Lag ved Strandgaarten SSO, for Kalundborg, og deres Vidnesbyrd om Klimaforandringer. København Medd. Dansk. Geol. Foren. **5** (11) 1917 (1–19). [Not seen by recorder.] **246**

Johnson, C. W. Martyn's Universal Conchologist. Nautilus Boston Mass. **30** 1917 (130–132). **247**

Johnston, W. A. Late Pleistocene oscillations of sea-level in the Ottawa valley. Canada Dept. Mines Geol. Surv. Ottawa Mus. Bull. **24** 1916 (1–14). **248**

Joleaud, L. *vide* Depéret, C.

Kennard, A. S. The Pleistocene succession in England. Ipswich Proc. Prehist. Soc. East Anglia. **2** 1915–1916 (1916) (249–267). **249**

Kennard, A. S. and **Woodward,** B. B. On the occurrence of *Eulota fruticum* (Müll.) in Kent. London Proc. Malac. Soc. **12** 1917 (124). **250**

Kennard, A. S. and **Woodward,** B. B. On the occurrence in the British Isles of *Paludestrina minuta* (Totten). London Proc. Malac. Soc. **12** 1917 (124). **251**

Kennard, A. S. and **Woodward,** B. B. On the occurrence in England of *Helicella neglecta* (Drap.) With notes on the anatomy by Dr. A. E. **Boycott,** F.R.S., and on the radula by the Rev. E. W. **Bowell,** M.A. London Proc. Malac. Soc. **12** 1917 (133–134). **252**

Kennard, A. S. and **Woodward,** B. B. Note on the Mollusca from the rain-washes at Godstone. London Proc. Geol. Ass. **28** 1917 (38). **253**

Kennard, A. S. and **Woodward,** B. B. The Post-Pliocene non-marine mollusca of Ireland. London Proc. Geol. Ass. **28** 1917 (109–190). **254**

Kennard, A. S. and **Woodward,** B. B. *vide* Warren, S. H.

Kew, W. S. W. *vide* Dickerson, R. E.

Kilian, W. and **Reboul,** P. Mémoires pour servir à l'explication de la carte géologique détaillée de la France. Contribution à l'étude des faunes paléocrétacées du sud-est de la France. I. La faune de l'Aptien inférieur des environs de Montélimar (Drome) (Carrière de l'homme d'armes). II. Sur quelques Ammonites de l'Hauterivien de la Bégude (Basses-Alpes). Imprim. National Paris **1915** 1915 (i–iv 1–221 225–296) pls. i–xv. **255**

Kindle, E. M. Bottom control of marine faunas as illustrated by dredging in the Bay of Fundy. Amer. J. Sci. Newhaven Conn. **41** 1916 (449–461). **256**

Kindle, E. M. Notes on the bottom environment of the marine invertebrates of western Nova Scotia. Ottawa Nat. Ottawa **30** 1917 (149–154). **257**

Klett, B. Aus der Konchylienfauna der diluvialen und alluvialen Schwemmlandbildungen der Umgebung von Mühlhausen i. Th. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (133–137). **258**

Kobelt, W. Beiträge zur Molluskenfauna von Neuguinea. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (1–8) pl. i. **259**

Koch, L. Nye Bidrag til Mullerupkulturens geologiske Alder. Kjobenhavn Medd. Dansk geol. Foren. **5** (6) 1916 (1–14). **260**

Kolasius, H. Beitrag zur Verbreitung von *Pupilla sterri* Voith. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (37–40). **261**

Krause, P. G. Ueber einen neuen Fundpunkt jungdiluvialer Konchylien aus Ostpreussen. Zeitschr. deutsch. Geol. Ges. B. Monatsb. **69** 1917 (90–93). **262**

Krumbach, T. Napfschnecken in der Gezeitenwelle und der Brandungszone der Karstküste. (Biologische Küstenstudien an der Adria.) Notizen über die Fauna der Adria bei Rovigno. Zool. Anz. Leipzig **49** 1917 (96–123). **263**

L. Conchological notes. Ottawa Nat. Ottawa **29** 1915 (51–52). **264**

L., F. R. New *Sphaeriidae.* Ottawa Nat. Ottawa **30** 1916 (93–97). **265**

Lameere, A. Contributions à la connaissance des Dicyémides. (IV). Rapports entre la vie des Dicyémides et celle des Cephalopodes. Bull. Biol. France et Belg. Paris **51** 1917 (347–390). **266**

Lamy, E. Les Mactres et les Lutraires de la Mer Rouge, d'après les matériaux recueillis par M. le Dr. Jousseaume. Paris Bull. Mus. Hist. Nat. **22** 1916 (237–242 305–310). **267**

Lamy, E. Les Cardites et les Cypricardes de la Mer Rouge, d'après les matériaux recueillis par M. le Dr. Jousseaume. Paris Bull. Mus. Hist. Nat. **22** 1916 (311–316). **268**

Lamy, E. Les Pectoncles de la Mer Rouge, d'après les matériaux recueillis par M. le Dr. Jousseaume. Paris Bull. Mus. Hist. Nat. **22** 1916 (384–387). **269**

Lamy, E. Description d'un Lamellibranche nouveau du Golfe de Californie. Paris Bull. Mus. Hist. Nat. **22** 1916 (443–445). **270**

Lamy, E. Les *Arches* de la Mer Rouge (d'après les matériaux recueillis par M. le Dr. Jousseaume). Paris Bull. Mus. Hist. Nat. **23** 1917 (26–34). **271**

Lamy, E. Révision des *Crassatellidae* vivants du Muséum d'Histoire naturelle de Paris. J. conchyliol. Paris **62** 1916 (1917) (197–270) pl. vi. **272**

Lamy, E. Révision des *Mactridae* vivants du Muséum d'histoire naturelle de Paris. J. conchyliol. Paris **63** 1917 (173–275) pl. vi. **273**

Lamy, E. *vide* Dautzenberg, P.

Lange, E. *Trigonia smeei* Sowerby und ihre horizontale Verbreitung. Centralbl. Min. Geol. Paläont. Stuttgart **1917** 1917 (492–496). **274**

Lebour, Marie V. The *Microplankton* of Plymouth Sound from the region beyond the breakwater. Plymouth J. Mar. Biol. Ass. (N.S.) **11** 1917 (133–182). [List of Mollusca (169).] **275**

Lewis, H. B. and **Jewell,** M. E. The occurrence of lichenase in the digestive tract of invertebrates. New York N.Y. Soc. exper. Biol. Med. Proc. **14** 1916 (59–60). **276**

Loomis, F. B. *vide* Blaney, D.

Lundquist, G. Norrländska mollusklokaler. Ark. Zool. Stockholm **11** (9) 1917 (1–16). **277**

Lundquist, G. Till molluskernas biologi. Fauna och Flora Uppsala **12** 1917 (46–47). [Not seen by recorder.] **278**

Lynge, H. *vide* Johansen, A. C.

MacBride, E. W. Oyster culture and clam fishing, Prince Edward Island. Contrib. Canad. Biol. Ottawa (1906–1910) **1912** 1912 (217–220). **279**

Malone, J. G. Albinistic *Epiphragmophora fidelis.* Nautilus Boston Mass. **31** 1917 (72). **280**

Maluquer, J. Algunos moluscos terrestres de la isla Cabrera. Madrid Bol. R. Soc. Esp. Hist. Nat. **17** 1917 (394–396). **281**

Maluquer, J. Organización i increment de la seccio oceanografica. Barcelona Junta Ci. Nat. **2** 1917 (205–238). [Mollusca (226–229)]. **282**

Marshall, J. T. Additions to "British Conchology" Pt. VII (cont.) J. Conch. Leeds **15** 1917 (168–174 198–203). **283**

Marshall, P. Geology of the Central Kaipara. Wellington Trans. & Proc. N.Z. Inst. **49** 1916 (1917) (433–450) pl. xxxi. **284**

Marshall, P. The Wangaloa Beds. Wellington Trans. & Proc. N.Z. Inst. **49** 1916 (1917) (450–460) pls. xxxiv–xxxvii. **285**

Marshall, P. Additional fossils from Target Gully, near Oamaru. Wellington Trans. & Proc. N.Z. Inst **49** 1916 (1917) (461–462). **286**

Marshall, P. Fossils and age of the Hampden (Onekakara) Beds. Wellington Trans. & Proc. N.Z. Inst. **49** 1916 (1917) (463–466). **287**

Marshall, P. Cainozoic fossils from Oamaru. Wellington Trans. and Proc. N.Z. Inst. **47** 1914 (1915) (377–387). **288**

Marshall, W. A. *Lampsilis ventricosa cohongoronta* in the Potomac River. Nautilus Boston Mass. **31** 1917 (40–41). **289**

Marshall, W. B. New and little-known species of South American fresh water mussels of the genus *Diplodon.* Washington D.C. Smithsonian Inst. U.S. Nation. Mus. Proc. **53** 1917 (381–388) pls. l–lv. **290**

Martel, H. Coquilles de Cancale: Iconographie et critique de quelques petites espèces. J. conchyliol. Paris **63** 1917 (1–8) pl. i. **291**

Martel, H. Coquilles de Cancale: Note sur la dispersion géographique du *Gomphroa boissyi* Dupuy. J. conchyliol. Paris **63** 1917 (9). **292**

Martin, K. Die altmiocäne Fauna des West-Progogebirges auf Java. [cont.] Leiden Samml. Geol. Reichsmus. (N.S.) **2** 1917 (261–296) pls. iv–v. **293**

Martin, K. Die Gattung *Vicarya,* d'Archiac. Leiden Samml. geol. Reichsmus. (N.S.) **2** 1917 (297–298). **294**

Martin, K. Bemerkungen über sogenannt oligocäne und andere Versteinerungen von Celebes. Leiden Samml. Geol. Reichsmus. (N.S.) **2** 1917 (299–308). **295**

Massy, Anne L. Mollusca. Part II. Cephalopoda. British Antarctic ("Terra Nova") Expedition, 1910. Brit. Mus. (Nat. Hist.) London Nat. Hist. Rept. Zool. **2** 1916 (141–175). **296**

Massy, Anne L. The Gymnosomatous *Pteropoda* of the coasts of Ireland. Dublin Sci. Proc. R. Dublin Soc. (N.S.) **15** 1917 (223–244) pl. viii. **297**

Mather, K. F. Pottsville formations and faunas of Arkansas and Oklahoma. Amer. J. Sci. New Haven Conn. (4) **43** 1917 (133–139). [Mollusca (135–137)]. **298**

Meek, A. The problem of mussel culture. Cullercoats, Northumberland Rept. Dove Marine Lab. **1916–1917** 1917 (20–23). **299**

Melvill, J. C. A revision of the *Turridae* (*Pleurotomidae*) occurring in the Persian Gulf, Gulf of Oman and North Arabian Sea, as evidenced mostly through the results of dredgings carried out by Mr. F. W. Townsend, 1893–1914. London Proc. Malac. Soc. **12** 1917 (140–201) pls. viii–x. **300**

Melvill, J. C. Obituary notice: Edgar Albert Smith, I.S.O. J. Conch. Leeds **15** 1917 (151–153). **301**

Melvill, J. C. Note on *Conus traversianus* Smith. J. Conch. Leeds **15** 1917 (178). **302**

Melvill, J. C. Description of a new species of *Terebra* from the Mekran Coast, Arabian Sea. J. Conch. Leeds **15** 1917 (188–189). **303**

Melvill, J. C. Obituary notice: J. H. Ponsonby-Fane, F.Z.S. J. Conch. Leeds **15** 1917 (195–197). **304**

Melvill, J. C. Note on *Conus melvilli* Sow. J. Conch. Leeds **15** 1917 (222). **305**

Melvill, J. C. and **Standen,** R. A revision of the species of *Terebra* occurring in the Persian Gulf, Gulf of Oman, and Arabian Sea, as evidenced in the collection formed by Mr. F. W. Townsend, 1893–1914. J. Conch. Leeds **15** 1917 (204–216). **306**

Merkel, E. Gesetzmässigkeiten im Bau des Schneckengehäuses. Eine konchyliologisch-architektonische Studie. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (31–37). **307**

Merkel, E. Versuch einer architektonisch-konchyliologischen Studie über den Aufbau des Clausiliengehäuses. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (129–133). **308**

Monterosato, T. A. di. Ostreae ed Anomiae del Mediterraneo. Genova Ann. Mus. Civ. Stor. Nat. (3) **7** 1915 (7–16) pls. i–iv. **309**

Morris, Margaret. A cytological study of artificial parthenogenesis in *Cumingia*. J. exper. Zool. Philadelphia Pa. **22** 1917 (1–50) 8 pls. **310**

Mortensen, T. Papers from Dr. Th. Mortensen's Pacific expedition 1914–16. I. Observations on protective adaptations and habits, mainly in marine animals. Kjobenhavn Vid. Medd. Dansk. naturh. Foren. Odense **69** 1917 (57–96) pl. i. **311**

Muchardt, H. Nagra bidrag till molluskernas utbredning i Öresund. Kjobenhavn Vid. Medd. Dansk. naturh. Foren. Odense **68** 1917 (51–63). **312**

Müller, E. *Helix* (*Fruticicola*) *rubiginosa* (Zgl.) A. Schm. var. *ehrmanni* n. var. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (27–29). **313**

Murray, J. *Limnea stagnalis* introduced into Cumberland. Naturalist London **1917** 1917 (239). **314**

N., R. B. Robert Lechmere Guppy, 1836–1916. London Proc. Malac. Soc. **12** 1917 (218–219). **315**

Naef, A. Ueber neue Sepioliden aus dem Golf von Neapel. Napoli Publ. Staz. Zool. Milano **1** 1916 (1–10). **316**

Naef, A. Systematische Uebersicht der mediterranen Cephalopoden. Napoli Publ. Staz. Zool. Milano **1** 1916 (11–19). **317**

Nelson, J. An investigation of oyster propagation in Richmond Bay, P.E.I. during 1914. Contrib. Canad. Biol. Ottawa (1915–1916) **1917** 1917 (53–78). **318**

Newton, R. B. On a fossiliferous limestone from the North Sea. London Q.J. Geol. Soc. **72** 1917 (7–22) pl. ii. **319**

Newton, R. B. On some Cretaceous Brachiopoda and Mollusca from Angola, Portuguese West Africa. Edinburgh Trans. R. Soc. **51** 1917 (561–580) 2 pls. **320**

Newton, R. B. On the conchological features of the Lenham Sandstones of Kent and their statigraphical importance (concluded). J. Conch. Leeds **15** 1917 (137–149). **321**

Nicolesko, C. Application des empreintes au collodion à la reproduction des cloisons des Ammonoidés. Paris C. R. Acad. sci. **165** 1917 (708–710). **322**

Nielsen, P. Fortegnelse over Molluskfaunaen ved Nœstved. Flora og Fauna København **1917** 1917 (9–12). **323**

Nobre, A. Moluscos de Portugal. 2ª. Parte. Descrição dos moluscos terrestres, fluviais e das águas salobras de Portugal. Lisboa Mem. Soc. Port. Sci. Nat. **1** 1913 (129–343). **324**

Nørregaard, E. M. Mellem-miocaene blokke fra Esbjerg. Kjobenhavn Medd. Dansk geol. Foren. **5** (1) 1916 (1–58) pls. i–iii. [Resumé in French (46–52)]. **325**

Nordgaard, O. Havströmmene og den norske marine fauna. Trondhjem Det. K. Norske Vid-Selsk. Skr. No. **5** 1914 (1915) (1–34) pls. i–viii. **326**

North, F. J. On a boring for water at Roath, Cardiff; with a note on the underground structure of the pre-Triassic rocks of the vicinity. Cardiff Nat. Soc. Rept. & Trans. **48** 1915 (1916) (36–49) [List of fossils (44–46)]. **327**

Odhner, N. H. Results of Dr. E. Mjöbergs Swedish scientific expeditions to Australia 1910–1913. 17 Mollusca. Stockholm K. Svenska Vet.-Ak. Handl. **52** (16) 1917 (1–115) pls. i–iii. **328**

Oldham, C. Report on land and freshwater mollusca observed in Hertfordshire in 1913, 1914 and 1915. Watford Trans. Herts N. H. Soc. **16** 1917 (121–124). **329**

Oldham, C. *Pisidium lilljeborgi* in Carnarvonshire. J. Conch. Leeds **15** 1917 (180). **330**

Oldroyd, Ida S. A new Californian *Sigaretus*. Nautilus Boston Mass. **31** 1917 (13). **331**

Oliver, A. M. Northumbrian *Pisidia* (Fresh water mollusca). Vasculum, Sunderland **3** 1917 (59–60). **332**

Olmsted, J. M. D. Notes on the locomotion of certain Bermudian mollusks. J. exper. Zool. Philadelphia Pa. **24** 1917 (223–236). **333**

Olsson, A. New and interesting Neocene fossils from the Atlantic coastal plain. Ithaca N.Y. Cornell Univ. Bull. Amer. Paleont. **5** (24) 1914 (41–72) pls. viii–xii. **334**

Oppenheim, P. Über Fossilien aus dem östlichen Kleinasien. Berlin Zeitschr. deutsch. Geol. Ges. (B.) Monatsb. **69** 1917 (72–84). **335**

Ortmann, A. E. The anatomy of *Contradens cambojensis* (Sow.) (*Nayades*). Nautilus Boston Mass. **30** 1917 (106–108) pl. iv f. 10. **336**

Ortmann, A. E. A new type of the nayad-genus *Fusconaia*, group of *F. barnesiana* Lea. Nautilus Boston Mass. **31** 1917 (58–64). **337**

Osman, C. W. The landslips of Folkestone warren and thickness of the lower chalk and gault near Dover. London Proc. Geol. Ass. **28** 1917 (59–84) pls. v–viii. **338**

Ostenfeld, C. H. Catalogue des espèces de plantes et d'animaux observées dans le Plankton recueilli pendant les expéditions depuis le mois de juillet 1908 jusqu'au mois de décembre 1911. Copenhagen Publ. de Circ. **70** 1916 (1–87) [Mollusca (79–81)]. **339**

Otterstrom, C. V. Vandremuslingen (*Dreissenssia polymorpha* Pall.) i Furesø. Kjobenhavn Vid. Medd. Dansk naturh. Foren. **68** 1917 (73–81). **340**

Overton, H. *vide* Bloomer, H. H.

Øyen, P. A. Kvartaer-studier i Trondhjemsfeltet. K. Norske Vid. Selck. Skrif. Christiania **1914** 1915 (3–506). **341**

Pallary, P. Observations relatives à la nomenclature des *Melanopsis* fossiles. Alger Bull. Soc. Hist. Nat. Afr. Nord **7** 1916 (70–87). **342**

Pallary, P. Hélicidées nouvelles du Maroc. J. conchyliol. Paris **63** 1917 (126–141) pl. v. **343**

Pallary, P. Mollusques marins des Dardanelles colligés par M. Claude Bravard. J. conchyliol. Paris **63** 1917 (142–147). **344**

Paris, E. T. and **Richardson,** L. Some Inferior-Oolite *Pectinidae*. London Q. J. Geol. Soc. **71** 1916 (521–534) pls. xliv–xlv. **345**

Parker, G. H. The pedal locomotion of the sea-hare *Aplysia californica*. J. exper. Zool. Philadelphia Pa. **24** 1917 (139–145). **346**

Parona, C. F. Notevole deformità nell'apparato cardinale di un Ippurite. Torino Atti Accad. sci. **52** 1917 (392–398) 1 pl. **347**

Peyrot, A. *vide* Cossmann, M.

Pilsbry, H. A. Midpacific land snail faunas. Washington D.C. Proc. Nation Acad. Sci. **1916** 1916 (429–433). **348**

Pilsbry, H. A. Notes on the anatomy of *Oreohelix*. II. Philadelphia Pa. Proc. Acad. Nat. Sci. **69** 1917 (42–46). **349**

Pilsbry, H. A. The reproductive organs of *Epiphragmophora callistoderma* P. & F. Philadelphia Pa. Proc. Acad. Nat. Sci. **69** 1917 (47). **350**

Pilsbry, H. A. Marine mollusks of Hawaii, I–III. Philadelphia Pa. Proc. Acad. Nat. Sci. **69** 1917 (207–230) pls. xiv–xv. **351**

Pilsbry, H. A. Manual of Conchology; structural and systematic. With illustrations of the species. Second series: Pulmonata. Philadelphia Conchological Dept. Acad. Nat. Sci. **23** parts 94 & 95 1917 (113–256) pls. xiv–xxxviii. **352**

Pilsbry, H. A. Rafinesque's genera of fresh-water snails. Nautilus Boston Mass. **30** 1917 (109–114). **353**

Pilsbry, H. A. A new *Hemphillia* and other snails from near Mt. Hood, Oregon. Nautilus Boston Mass. **30** 1917 (117–119) pl. iv, fig. 9. **354**

Pilsbry, H. A. *Philomycus* in Arizona. Nautilus Boston Mass. **30** 1917 (119). **355**

Pilsbry, H. A. A new *Holospira* from Chihuahua. Nautilus Boston Mass. **30** 1917 (124–125) pl. iv f. 6. **356**

Pilsbry, H. A. Notes on the *bifasciata* group of *Oxychona*. Nautilus Boston Mass. **30** 1917 (125–129) pl. iv. **357**

Pilsbry, H. A. *Amnicolidae* from Oneida Lake, N.Y. Nautilus Boston Mass. **31** 1917 (44–46). **358**

Pilsbry, H. A. A new South African *Nesopupa*. Nautilus Boston Mass. **31** 1917 (50–51). **358a**

Pilsbry, H. A. and **Brown,** A. P. Oligocene fossils from the neighbourhood of Cartagena, Colombia, with notes on some Haitian species. Philadelphia Pa. Proc. Acad. Nat. Sci. **69** 1917 (32–41) pls. v, vi. **359**

Pilsbry, H. A., and **Ferriss,** J. H. Mollusca of the Southwestern States, VIII: The Black Range, New Mexico. Philadelphia Pa. Proc. Acad. Nat. Sci. **69** 1917 (83–107) pls. vii–x. **360**

Pilsbry, H. A. and **Johnson,** C. W. New mollusca of the Santo Domingan Oligocene. Philadelphia Pa. Proc. Acad. Nat. Sci. **69** 1917 (150–202). **361**

Plate, L. Fauna ceylanica, Untersuchungen zur Fauna Ceylons nach den Sammlungen von L. Plate. II. Uebersicht ueber biologische Studien auf Ceylon. Jenaische Zeitschr. Naturw. Jena **54** 1916 (1–42) pls. i–ix [Mollusca (11–12).] **362**

Pollonera, C. Excursioni zoologiche del Dott. Enrico Festa nell'Isola di Rodi. Torino Boll. Mus. Zool. Anat. Comp. **31** (716) 1916 (1–9). **363**

Rajat, H. L'action du chlorure de sodium sur les mollusques aquatiques. Paris C. R. Soc. Biol. **80** 1917 (172). **364**

Rajat, H. La vie des mollusques (*Limnaea limosa*) dans les milieux artificiellement colorés. Paris C. R. Soc. Biol. **80** 1917 (173–174). **365**

Rassmuss, H. Alpine Cephalopoden im niederschlesischen Muschelkalk. Berlin Jahrb. K. Preuss. Geol. Landesanst. **34** 1913 (1914) (283–306) pls. ii–iv. **366**

Ravn, J. P. J. Om en Blok av neocom fra Hanø i Vesteraalen. Beskrivelse af Faunaen. Norsk Geol. Tidsskrift Kristiania **3** (4) 1915 (18–32) pls. i–ii. [German resumé (29–31)]. **367**

Ravn, J. P. J. Kridtaflejringerne paa Bornolms Sydvestkyst og deres Fauna. I. Cenomanet. Copenhague Commun. Paleontol. Mus. Min. Geol. Univ. No. **12** 1916 (1–39) [French resumé (38–39)]. **368**

Reboul, P. *vide* Kilian, W.

Redfield, Elizabeth. The rhythmic contractions in the mantle of lamellibranchs. J. exper. Zool. Philadelphia Pa. **22** 1917 (231–239). **369**

Reed, F. R. C. *vide* Gardiner, C. I.

Reinhard, O. Bemerkung zu *Planorbis corneus* L. var. *praetexta* Hille. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (138–139). **370**

Remlinger, P. Un milieu nutritif de guerre. Le bouillon d'escargots. Paris C. R. Soc. Biol. **79** 1916 (1109–1110). **371**

Revil, J. Géologie des chaines jurassiennes et subalpines de la Savoie. Appendice paléontologique. Chambéry Mem. Acad. Sci. Savoie (5) **2** 1914 (291–295) pls. i–iv. **372**

Reynell, A. Notes on Donovan's *Naturalist's Repository*. London Proc. Malac. Soc. **12** 1917 (309–311). **373**

Richards, A. Note on the relation of snail fauna to floods. Nautilus Boston Mass. **31** 1917 (64–68). **374**

Richardson, L. The Inferior Oolite and contiguous deposits of the Doulting—Milborne-Port district (Somerset). London Q. J. Geol. Soc. **71** 1916 (473–519) pls. xl–xliii. **375**

Richardson, L. *vide* Paris, E. J.

Ritchie, J. Animal remains from excavations at Dunagoil Cave, Bute. Rothesay Trans. Buteshire Nat. Hist. Soc. **8** 1914–1915 (1916) (50–60). **376**

Robertson, A. D. The mollusca of Georgian Bay. Contr. Canad. Biol. Ottawa (1911–1914) **1915** 1915 (95–111) pls. x–xii. **377**

Robertson, A. D. First report on the "Barren Oyster Bottoms" investigation, Richmond Bay, P.E.I. Contr. Canad. Biol. Ottawa (1914–1915) **1916** 1916 (55—71). **378**

Roebuck, W. D. Census authentications. J. Conch. Leeds **15** 1917 (190–192 223–224). **379**

Roebuck, W. E. The Stewartry of Kirkcudbright and its inland molluscan fauna. Scot. Nat. Edinburgh **1917** 1917 (7–12 27–33). **380**

Roebuck, W. D. Elgin: The vice-county and its molluscan fauna. Scott. Nat. Edinburgh **1917** 1917 (79–89). **381**

Roos, H. Ueberwinterungsversuche mit *Helix pomatia* L. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (29–31). **382**

Royer, J. Eine Lokalfauna des 18. Jahrhunderts. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (185–189). **383**

S., E. R. John Henry Ponsonby-Fane, 1848–1916. London Proc. Malac. Soc. **12** 1917 (217–218). **384**

Sasaki, M. Notes on the *Cephalopoda*. I. On the male of *Amphitretus pelagicus* Hoyle. II. Diagnoses of four new species of *Polypus*. Annot. Zool. Jap. Tokyo **9** 1917 (361–367). **385**

Schegolev, G. Notes spermatologiques. 1. Sur la disposition des cellules séminales chez l'*Helix pomatia*. Сперматологическія замѣтки. Rev. Zool. Russe Moscou **1** 1917 (360–367) [Resumé in Russian (366–367)]. **386**

Schitz, V. О сперматогенезѣ у крылоногихъ моллюсковъ и, эволютивномъ циклѣ хромозомъ, "установленномъ Царникомъ. Sur la spermatogénèse chez les mollusques Ptéropodes et le cycle évolutif des heterochromosomes de Zarnik. Rev. Zool. Russe Moscou **1** 1917 (344–360) [Resumé in French (357–360)]. **387**

Schlesch, H. Notes on *Helix* (*Acanthinula*) *harpa*, Say, and its distribution. Naturalist London **1917** 1917 (166–168). **388**

Schlesch, H. Malacological fauna of Halldorsstödum, North Iceland. Naturalist London **1917** 1917 (169). **389**

Schlesch, H. List of Iceland land and fresh water mollusca. Naturalist London **1917** 1917 (169–170). **390**

Schlesch, H. Notes on *Planorbis* and *Margaritana* in Iceland. Naturalist London **1917** 1917 (201). **391**

Schlesch, H. *Dreissensia polymorpha*, Pallas. Naturalist London **1917** 1917 (234). **392**

Schlesch, H. The Icelandic forms of *Limnaea*. Naturalist London **1917** 1917 (257–259). **393**

Schlesch, H. Notes on the slugs and land shells of Iceland. Naturalist London **1917** 1917 (297–300 330–332). **394**

Schlesch, H. Notes on *Margaritana margaritifera* (Linné). Naturalist London **1917** 1917 (332–334). **395**

Schlesch, H. Note on *Helix hispida* var. *mörchi* Westerlund. J. Conch. Leeds **15** 1917 (194). **396**

Schmid, G. Die Lichtflucht der Clausilien. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (8–19). **397**

Schmid, G. Ueber Spielarten von *Cepaea*. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (111–119). **398**

Schröder, O. Beiträge zur Anatomie von *Amphidesma solidum*. Jenaische Zeitschr. Jena **54** 1916 (101–132). **399**

Sheppard, T. A new species of *Lima* from the English Chalk. Naturalist London **1917** 1917 (309–311). **400**

Shimer, H. W. Fossiliferous Miocene bowlders from Block Island, R. I. Amer. J. Sci. Newhaven Conn. **41** 1916 (255–256). **401**

Sich, A. Limacology. London Proc. S. London Ent. Nat. Hist. Soc. **1915–16** 1916 (41–49). **402**

Sleen, W. G. N. van der. De mollusken van het Naardermeer. Amsterdam Vereen. Naturmon. Ned. **1913–1917** 1917 (92–102) 3 pls. [Not seen by recorder.] **403**

Sowerby, G. B. New species of *Pupinella*, *Theodoxus* and *Tellina*. London Proc. Malac. Soc. **12** 1917 (320–321). **404**

Speight, R. The statigraphy of the Tertiary Beds of the Trelissick or Castle Hill Basin. Wellington Trans. & Proc. N.Z. Inst. **49** 1916 (1917) (321–356). [Mollusca (352)]. **405**

Stafford, J. On the fauna of the Atlantic coast of Canada. Second report.—Malpeque, 1903–1904. Contrib. Canad. Biol. Ottawa (1906–1910) **1912** 1912 (37–44). **406**

Stafford, J. On the fauna of the Atlantic coast of Canada. Third report—Gaspe, 1905–1906. Contrib. Canad. Biol. Ottawa (1906–1910) **1912** 1912 (45–67). **407**

Stafford, J. On the fauna of the Atlantic coast of Canada. Fourth report. Contrib. Canad. Biol. Ottawa (1906–1910) **1912** 1912 (69–78). **408**

Stafford, J. On the recognition of bivalve larvae in Plankton collections. Contrib. Canad. Biol. Ottawa (1906 1910) **1912** 1912 (221–242) pls. xxii–xxiv. **409**

Stamm, R. H. Sneglefaunaen paa Bulbjerg. Kjobenhavn Vid. Medd. Dansk naturh. Foren. **67** 1916 (223–229). **410**

Standen, R. On the calcareous eggs of terrestrial mollusca. J. Conch. Leeds **15** 1917 (154–164). **411**

Standen, R. Obituary notice: Rev. Lewis J. Shackleford. J. Conch. Leeds **15** 1917 (193–194). **412**

Standen, R. *vide* Melvill, J. C.

Steenberg, C. M. Om *Margaritana margaritifera* L. fra Varde Ad samt om et lille Mollusksambund fra Ribe Marsk. Kjobenhavn Vid. Medd. Dansk. naturh. Foren. **68** 1917 (65–72). **413**

Steenberg, C. M. Anatomie des *Acanthinula* et des *Vallonia*. Kjobenhavn Vid. Medd. Dansk naturh. Foren. **69** 1917 (1–15). **414**

Steenberg, C. M. Furesøens Molluskfauna. København D. K. Danske Vidensk. Selsk. Skr. naturv. math. (8) **3** (1) 1917 (78–120) pls. i–viii. [French résumé (194–200)]. **415**

Stefanini, G. Sull' esistenza dell' Oligocene in Friuli e sulle mutazioni del *Potamides margaritaceus.*, Br. Padova Atti Acc. Sci. Ven.–Trent.–Ist. (3) **8** 1915 (1916) (68–94) pl. v. **416**

Stefanini, G. Specie nuove del Miocene Veneto. Padova Atti Acc. Sci. Ven.-Trent.-Istr. (3) **8** 1915 (1916) (151–162). **417**

Stefanini, G. Fossili del Neogene Veneto. Padova Mem. Ist. Geol. Univ. **4** 1916 (1917) (3–198) pls. i–vii. **418**

Stelfox, A. W. *Otina otis* (Turton) on the County Down Coast. London Proc. Malac. Soc. **12** 1917 (318–319). **419**

Strömman, P., and Sundler, E. B. Land-och sätvattenmollusker från Boråstrakten (Sweden), insamlade 1914 och 1915. Fauna och Flora, Uppsala **11** 1916 (87–91). [Not seen by recorder]. **420**

Sundler, E. B. *vide* Strömman, P.

Swanton, E. W. Notes on some Dorset land shells. Dorchester Proc. Dorset N. H. Field Club **37** 1916 (194–197). **421**

Suter, H. On the origin of a new species by isolation. Wellington Trans. and Proc. N.Z. Inst. **49** 1916 (1917) (279–283). **422**

Taylor, F. Observations on *Planorbis dilatatus* Gould and *Physa heterostropha* Say at Oldham. Lancs. & Chesh. Nat. Darwen **10** 1917 (214–215). **423**

Taylor, J. W. Monograph of the land and freshwater mollusca of the British Isles. Taylor Bros. Leeds Pt. **23** 1917 (65–112) pls. vi–ix. **424**

Taylor, J. W. Discovery of *Hygromia striolata* in Nottinghamshire. Naturalist London **1917** 1917 (301). **425**

Taylor, J. W. *Hygromia revelata* in North Devon. J. Conch. Leeds **15** 1917 (222). **426**

Taylor, J. W. *Hygromia striolata* in Notts. J. Conch. Leeds **15** 1917 (222). **427**

Thiele, J. Bemerkungen über das "Tierreich" und den Nomenclator Generum Animalium. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (19–24). **428**

Thiem, H. Beiträge zur Anatomie und Philogenie der Docoglossen. I. Zur Anatomie von *Helcioniscus ardosiacus* Hombron et Jacquinot unter Bezugnahme auf die Bearbeitung von Erich Schuster in den Zoolog. Jahrb. Supplement XIII, Bd. IV, 1913. II. Die Anatomie und Phylogenie der Monobranchen (Akmäiden und Scurriiden nach der Sammlung Plates.) Jenäische Zeitschr. f. Naturw. Jena **54** 1917 (333–404b 405–630) pls. xxiii–xxvi. **429**

Thompson, Lillian D. Collecting in Digby, Nova Scotia. Nautilus Boston Mass. **31** 1917 (57–58). **430**

Thomson, J. A. The Hawera series, or the so-called "Drift Formation" of Hawera. Wellington Trans. & Proc. N.Z. Inst. **49** 1916 (1917) (414–417). **431**

Tilmann, N. Die Fauna des unteren und mittleren Lias in Nord- und Mittel-Peru. Neu. Jahrb. Min. Geol. Palaeont. Stuttgart Beil. Bd. **41** 1917 (628–712) pls. xxi–xxvi. **432**

Tomlin, J. R. le B. A systematic list of the *Marginellidae*. London Proc. Malac. Soc. **12** 1917 (242–306). **433**

Tomlin, J. R. le B. On *Volvaria lubrica*, Petterd. London Proc. Malac. Soc. **12** 1917 (308). **434**

Tomlin, J. R. le B. Obituary notice: Dr. H. F. Becker. J. Conch. Leeds **15** 1917 (221). **435**

Tomlin, J. R. le B. New name for *Microsetia* (preoccupied). J. Conch. Leeds **15** 1917 (221). **436**

Tomlin, J. R. le B. *Hygromia revelata* in North Devon. J. Conch. Leeds **15** 1917 (222). **437**

Tomlin, J. R. le B. *vide* Dean, J. D.

Tomlin, J. R. le B. *vide* Irelale, T.

Townsend, C. H. Voyage of the "Albatross" to the Gulf of California in 1911. New York N.Y. Bull. Amer. Mus. Nat. Hist. **35** 1916 (399–476). **438**

Trechman, C. T. The age of the Maitai series of New Zealand. Geol. Mag. London (6) **4** 1917 (53–64) pls. iv–v. **439**

Trechmann, C. T. Cretaceous mollusca from New Zealand. Geol. Mag. London (6) **4** 1917 (294–305 337–342) pls. xix–xxi. **440**

Trueman, A. E. Observations on the genus *Polymorphites*. Geol. Mag. London (6) **4** (442–447). **441**

Trueman, A. E. Varieties of *Helix nemoralis* L. in Notts. Naturalist London **1917** 1917 (94). **442**

Utterback, W. I. Naiadgeography of Missouri. Amer. Midland Nat. Notre Dame Ind. **5** 1917 (26–30). **443**

Vanatta, E. G. North Carolina land shells. Nautilus Boston Mass. **31** 1917 (71). **444**

Vayssière, A. Étude biologique sur le *Glandina guttata* Crosse & P. Fischer. J. conchyliol. Paris **63** 1917 (115–122) **445**

Vayssière, A. Note sur la presence d'un bras supplémentaire chez un *Eledone moschata* Leach. J. conchyliol. Paris **63** 1917 (123–125) pl. iv. **446**

Vayssière, A. Deuxième Expedition Antarctique Française (1908–1910), commandée par le Dr. Jean Charcot. Recherches zoologiques et anatomiques sur les mollusques amphineures et gastéropodes (Opisthobranches et Prosobranches). Masson & Cie., 120 Boulevard Saint Germain Paris **1917** 1917 (1–50) pls. i–iv. **447**

Vidal, L. M. Edad geologica de los lignitos de Selva y Binisalém (Mallorca) y descripción de algunas especies fósiles. Madrid Mem. R. Soc. Esp. Hist. Nat. **10** 1914–1917 (1917) (343–358) pls. i–iii. **448**

Vignal, L. Sur la voracité des *Zonites algirus* Linné. J. conchyliol. Paris **63** 1917 (10–12). **449**

Vredenberg, E. W. Description of some specimens of *Pleurotoma congener*, E. A. Smith, from the Andaman Sea, with special reference to certain peculiarities of the aperture. Calcutta Rec. Indian Mus. **13** 1917 (315–320) pl. xii. **450**

W. *Cepaea austriaca* bei Mühlhausen in Thüringen ausgesetzt. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (142). **451**

W., B. B. Obituary notice. Edgar Albert Smith, 1847–1916. London Proc. Malac. Soc. **12** 1917 (215–217). **452**

Wade, B. New and little known Gastropoda from the Upper Cretaceous of Tennessee. Philadelphia Pa. Proc. Acad. Nat. Sci. **69** 1917 (280–304) pls. xvii–xix. **453**

Walcott, C. D. Cambrian geology and paleontology. IV. No. 2. The Albertella fauna in British Columbia and Montana. Washington D.C. Smithsonian Inst. Misc. Coll. **67** (2445) 1917 (9–59) pls. i–vii. **454**

Walker, B. The type of *Pleurocera* Rafinesque. Ann Arbor Mich. Occ. Papers Mus. Zool. Univ. Michigan **38** 1917 (1–10). **455**

Walker, B. The method of evolution in the *Unionidae*. Ann Arbor Mich. Occ. Papers. Mus. Zool. Univ. Michigan **45** 1917 (1–10). **456**

Walker, B. A revision of the classification of the North American Patelliform *Ancylidae*, with descriptions of new species. Nautilus Boston Mass. **31** 1917 (1–10) pls. i–iii. **457**

Walker, B. A sinistral *Ampullaria*. Nautilus Boston Mass. **31** 1917 (35–36). **458**

Walker, B. A new *Gundlachia* from Guatemala. Nautilus Boston Mass. **31** 1917 (51–53) pls. i & iii. **459**

Walker, B. A list of shells from the East coast of Florida. Nautilus Boston Mass. **31** 1917 (53–57). **460**

[**Walker,** B.] *Valvata tricarinata perconfusa* **nom. n.** Nautilus Boston Mass. **31** 1917 (36). **461**

Walker, E. M. Notes on the land mollusca of De Grassi Point, Lake Simcoe, and other Ontario localities. Ottawa Nat. **31** 1917 (17–22 40–45). **462**

Walker, E. M. Bibliography of Canadian Zoology. Mollusca. Ottawa Trans. R. Soc. Canada (3) **10** 1917 (204). **463**

Wallis, A. The snail and its name. Northampton J. Northants. N. H. S. Field Club **18** 1915 (117–128) 2 pls. 1916 (143–154 171–181) 4 pls. **464**

Walther, K. Ueber das Alter und den geologischen Charakter der sog. Pampasformation in Uruguay. Geol. Rundschau Leipzig **5** 1914 (311–312). **465**

Waring, C. A. Statigraphic and faunal relations of the Martinez to the Chico and Tejon of Southern California. San Francisco Proc. Calif. Acad. Sci. (4) **7** 1917 (41–124) pls. vii–xvi. **466**

Warren, S. H. Further observations on the late Glacial, or Ponders End, stage of the Lea Valley. London Q. J. Geol. Soc. **71** 1916 (164–182) [Notes on the Mollusca by **Kennard** A. S. and **Woodward,** B. B. (179)]. **467**

Warren, S. A list of mollusks collected at Castle Island, Boston. Nautilus Boston Mass. **30** 1917 (129–130). **468**

Wenz, W. Zur Paläogeographie des Mainzer Beckens. Geol. Rundschau Leipzig **5** 1914 (321–346) pl. vii. **469**

Wenz, W. Die Hydrobienschichten von Hochstadt bei Hanau und ihre Fauna. Wiesbaden Jahrb. Nassauischen Ver. Naturk. **69** 1916 (56–68). **470**

Wenz, W. Die Molluskenfauna der Schleichsande und Cyrenenmergel in der Baugrube des Frankfurter Osthafens. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (154–166). **471**

Wenz, W. *vide* Fischer, K.

Wilckens, O. Die Geologie von Neuseeland. Geol. Rundschau Leipzig **8** 1917 (143–161). **472**

Williams, H. S. *Nuculites* from the Silurian formations of Washington County, Maine. Washington D. C. Proc. U. S. Nation. Mus. **54** 1917 (27–58) pls. xi–xii. **473**

Wilmer, L. W. Note on *Crioceras bowerbankii* (J. de C. Sowerby). London Proc. Malac. Soc. **12** 1917 (308). **474**

Winkley, H. W. Common names. Nautilus Boston Mass. **30** 1917 (120). **475**

Winslow, Mina L. An annotated list of shells from Northern Michigan. Ann Arbor Mich. Occ. Papers. Mus. Zool. Univ. Michigan **42** 1917 (1–16). **476**

Woodward, B. B. On the adventures of the genus name *Lucena*. London Proc. Malac. Soc. **12** 1917 (220). **477**

Woodward, B. B. Note on the Da Costa plates adapted for Rackett's edition of Pulteney's Catalogues. London Proc. Malac. Soc. **12** 1917 (220). **478**

Woodward, B. B. *vide* Kennard, A. S.

Wright, F. S. Mussel beds; their productivity and maintenance (The mussel beds of Cardigan Bay). Ann. Applied Biol. London **4** 1917 (123–152). **479**

Zaunick, R. *Dreissensia* in der Donau bei Wien. Frankfurt am Main Nachr.-Bl. D. malak. Ges. **49** 1917 (137–138). **480**

II. SUBJECT INDEX.

N.B.—*The number in Clarendon Type quoted after the author's name, in both the Subject and Systematic Indices, refers to "Titles" where the fuller reference will be found.*

GENERAL. 2203

Historical.

Bartsch, 13; Jackson, 243a.

Biography.

Ankert, 6; [Anon.], 8; Boettger, 39; Cockerell, 91; Dall, 124; Dautzenberg & Lamy, 130; Doello Jurado, 144, 145; Dreyer, 152; Heron-Allen, 221; Hesse, 222; Ihering, von, 236; Melvill, 301, 304; N., 315; S., 384; Standen, 412; Tomlin, 435; W., 452; Herr G. Schacko. Nachr.-Bl. D. malak. Ges. **49** 1917 (144).

Bibliography.

[Anon.], 7; Bartsch, 13; Boury, de, 45; Dautzenberg, 129; Freund, 169; Heron-Allen, 221; Johnson, 247; Reynell, 373; Royer, 383; Thiele, 428; Walker, 463; Woodward, 478.

General Treatises.

Jackson, 243a.

Important Works of Reference.

Hidalgo (Spain) **224; Nobre** (Portugal) **324; Pilsbry** (*Pupillidae*) **352; Taylor** (British Is.) **424.**

Local Lists.

A., 1; Allen, 2; Andrusov, 3; Bacchus, 10; Blaney & Loomis, 35; Boswell, 43; Butterfield, 59; Carr, 60; Dean, 131; Depéret & Gentil, 134; Detweiler, 136; Dickerson & Kew, 141; Klett, 258; Kennard & Woodward, 467; Lebour, 275; Maluquer, 281; Oldham, 329, 330; Oliver, 332; Ostenfeld, 339; Roebuck, 380, 381; Vanatta, 444; Walker, 460; Warren, 468.

Museums, Collections, Expeditions.

Bell, 23; Berry, 27, 28; Germain, 180; Lamy, 272, 273; Maluquer, 282; Massy, 296.

H. F. Carpenter collection. Nautilus **30** p. 132.

Oldroyd collection presented to Leland Stanford Jr. University. Nautilus **31** p. 71.

Ponsonby collection acquired by Bryant Walker. Nautilus **31** p. 36.

Nomenclature.

Bartsch, 17, 18; Berry, 31; Caziot, 80, 81; Fulton, 170c; Goodrich, 196; Hesse, 223; Hilber, 225; Iredale, 238; Pilsbry, 353; Thiele, 428; Tomlin, 436; [Walker] 461; Winkley, 475; Woodward, 477.

Technique.

Bavay, 19; Berry, 30; Bofill i Poch, 40; Coëmme, 94; Crozier, 114; Nicolesko, 322.

Miscellanea.

Cuénot, 118; Dall, 123; Doello Jurado, 146, 148; Ferriss, 162; Henderson, 218; Schlesch, 396; Wallis, 464.

STRUCTURE. 2207

General.

Dautan, 127; Heath, 208; Kennard & Woodward, 252; Odhner, 328; Ortmann, 337; Steenberg, 414; Thiem, 429; Vayssière, 447; Wallis, 464.

Nervous System.

Göthlin, 193; Huntze, 234; Ortmann, 336; Redfield, 369; Schröder, 399; Stafford, 409.

Glands.

Bottazzi, 44; Crozier, 113.

Shell.

Merkel, 307, 308; Schmid, 397.

Muscular System.

Schröder, 399.

Alimentary System, Radula and Jaws.

Berry, 27; Cooke, 100–104.

Excretory Organs.

Schröder, 399.

Reproductive Organs.

Bonnevie, 42; Boycott, 49, 53; Fischer, 163; Frankenberger, 168; Gould, 197; Pilsbry, 349, 350; Pilsbry & Ferriss, 360; Schegolev, 386; Steenberg, 414.

Sense Organs.

Arcy, 9; Crozier, 113, 116; Schröder, 399.

PHYSIOLOGY. 2211

General.

Wallis, 464.

Glandular Secretions, Pigments.

Crozier, 112.

Digestive Organs.

Boycott, 55; Craifaleanu, 110; Fosse, 166; Lewis & Jewell, 276; Stafford, 409.

Environmental Effects.

Arcy, 9; Baker, 11; Buchner, 57; Copeland, 105; Goldsmith, 195.

DEVELOPMENT. 2215

General.

Dantan, 127; Frierson, 170a; Gilmore, 190; Ortmann, 336.

Oogenesis and Ovum.

Fischer, 163; Gatenby, 172; Standen, 411.

Spermatogenesis and Spermatozoon.

Goldschmidt, 194; Gould, 197; Schitz, 387.

Embryology.

Conklin, 97, 98; Heilbronn, 216; Morris, 310; Ortmann, 336.

ETHOLOGY. 2219

General.

Bartsch, 13.

Movements, Locomotion.

Olmsted, 333; Parker, 346; Stafford, 409.

Enemies, Defence and Protection.

Baker, 11; Blake, 34; Bowell, 46; Cox, 108; Houlbert & Galaine, 232; Mortensen, 311; Nelson, 318; Robertson, 378.

Feeding Habits.

Baker, 11, 12a; Churchill, 89; Gould, 198; Vayssière, 445; Vignal, 449.

Breeding Habits.

Boycott, 52, 54; Crozier, 117; Fischer, 163; Gilmore, 190; Gould, 198; Nelson, 318; Vayssière, 445.

Coloration.

Greger, 200; Malone, 280; Schmid, 398.

Habitat.

Arcy, 9; Baker, 11, 12a; Crozier, 115; Gould, 197; Melvill, 305; Richards, 374.

Boring and Burrowing Habits.

Baker, 11; Lundquist, 278.

Acclimatisation.

Cockerell, 92; Rajat, 364, 365; Taylor, 423.

Hibernation and Æstivation.

Ankert, 5; Hadden, 206; Roos, 382.

Parasitism, Commensalism, Parasites, etc.

Baker, 11; Becker, 21, 22; Cawston, 63–79; Faust, 160.

Evolution.

Hedley, 214; Walker, 456.

Sexual Dimorphism.

Boycott, 48, 51; Gould, 197.

Economics.

Baker, 11, 12a; Bartsch, 13; Copeland, 105; Cox, 108; Ehrmann, 155; Hedley, 212; Hornell, 231; Houlbert & Galaine, 232; Jackson, 241, 242, 243a; Kindle, 256; MacBride, 279; Meek, 299; Nelson, 318; Remlinger, 371; Robertson, 378; Townsend, 438; Wright, 479.

VARIATION AND ÆTIOLOGY. 2223

General Treatises.

Haas, 205.

Teratology, Phylogeny and Relationship.

Bowell, 47; Chace, 87; Cooke 102; Hedley, 213; Malone, 280; Parona, 347; Schmid, 398; Vayssière, 446; Walker, 458.

Evolution.

Buchner, 57; Suter, 422.

DISTRIBUTION. 2227

General.

Bavay, 20; Boury, de, 45; Haas, 205; Lamy, 272, 273; Tomlin, 433.

(a) RECENT.

(α) *Marine.*

North Atlantic Ocean, Caribbean Sea and Gulf of Mexico.

Bavay, 20; Bigelow, 33; Butterfield, 59; Cooke, 100; Copeland, 105; Crozier, 115; Cuénot, 118; Dacie, 119; Dall & Bartsch, 126; Dautzenberg, 128; Detweiler, 136; Evans & Evans, 158; Gardiner, 170f; Hidalgo, 224; Kindle, 256, 257; Lameere, 266; Lebour, 275; MacBride, 279; Marshall, 283; Martel, 291; Massy, 297; Muchardt, 312; Nelson, 318; Nordgaard, 326; Olmsted, 333; Ostenfeld, 339; Robertson, 378; Sleen, van der, 403; Stafford, 406–408; Stelfox, 419; Thompson, 430; Warren, 468; Wright, 479.

Mediterranean Sea and Black Sea.

Coen, 95; Cuénot, 118; Germain, 182; Hidalgo, 224; Krumbach, 263; Maluquer, 282; Monterosato, 309; Naef, 316, 317; Pallary, 344.

South Atlantic Ocean.

Bavay, 20; Cate, 62; Doello Jurado, 143, 150; Massy, 296.

Indian Ocean, Red Sea.

Bavay, 20; Hedley, 212; Hornell, 231; Iredale, 239; Lamy, 267, 268, 269, 271; Melvill, 300, 302, 303; Melvill & Standen, 306; Odhner, 328; Plate, 362; Sowerby, 404; Vredenberg, 450.

Malaysia.

Martin, 294.

Pacific Ocean.

Bartsch, 14, 15; Bavay, 20; Berry, 26, 28, 29, 32; Chace, 87; Dall, 120, 121, 122; Dall & Bartsch, 126; Doello Jurado, 148; Gigoux, 189; Heath, 208; Hirase, 228; Iredale & Tomlin, 240; Lamy, 270; Massy, 296; Mortensen, 311; Oldroyd, 331; Parker, 346; Pilsbry, 351; Sasaki, 385; Townsend, 438.

Southern Ocean.

Gatliff & Gabriel, 173; Hedley, 209, 211; Suter, 422; Tomlin, 434.

Antarctic Ocean.

Berry, 27; Massy, 296; Vayssière 447.

(β) *Non-Marine.*

Denmark. 2227 da

Johansen, 245; Nielsen, 323; Otterstrom, 340; Stamm, 410; Steenberg, 413, 415.

Sweden.

Holmquist, 229; Lundquist, 277; Strömman & Sundler, 420.

Northern Europe.

Schlesch, 388.

Russia and Poland 2227 db

Geyer, 186, 187, 188; Hilbert, 226, 227; Reinhard, 370.

Germany. 2227 dc

Buchner, 57; Klett, 258; Kolasius, 261; Müller, 313; Royer, 383; Schmid, 398; W., 451.

British Islands. 2227 de

A., 1; Bacchus, 10; Bloomer & Overton, 36; Bolam, 41; Boycott, 50, 52, 53, 54; Carr, 60; Carter, 61; Dean, 131; Dean & Tomlin, 132; Hadden, 206, 207; Jackson, 243; Kennard & Woodward, 250–254; Murray, 314; Oldham, 329, 330; Oliver, 332; Roebuck, 379–381; Sich, 402; Swanton, 421; Taylor, 423–427; Trueman, 442.

France. 2227 df

Caziot, 84; Martel, 292.

Spain and Portugal. 2227 dg
Fuente, de la, 170b; Haas, 203, 204; Nobre, 324.

Italy, Sardinia, etc. 2227 dh
Caziot, 82, 83, 85; Maluquer, 281.

Switzerland. 2227 di
Eder, 153, 154.

Austria-Hungary. 2227 dk
Ankert, 5; Freund, 169; Pilsbry, 352; Taylor, 424; Zaunick, 480.

Balkan Peninsula. 2227 dl
Frankenberger, 167; Hesse, 223; Honigmann, 230.

Mediterranean Islands. 2227 dm
Pollonera, 363.

Siberia. 2227 ea
Pilsbry, 352.

China. 2227 eb
Pilsbry, 352.

Japan. 2227 ec
Pilsbry, 352.

Indo-China. 2227 ed
Pilsbry, 352; Sowerby, 404.

Siam. 2227 ee
Fulton, 170c.

British India, etc. 2227 ef
Godwin-Austen, 192; Hornell, 231; Pilsbry, 352.

Malaysia, Philippines, etc. 2227 eg
Bartsch, 16; Gude, 202; Pilsbry, 352.

Caspian Sea. 2227 ek
Andrusov, 4.

N. Africa. 2227 fa
Pallary, 343.

Sahara, etc. 2227 fc
Germain, 177, 183.

West Africa. 2227 fd
Germain, 178, 179, 184; Pilsbry, 352.

East and Central Africa. 2227 ff
Boettger, 38; Germain, 175, 176.

South Africa. 2227 fg
Becker, 21, 22; Cawston, 63–79; Pilsbry, 352, 358a.

Canada. 2227 gb
Germain, 181; L., 264, 265; Robertson, 377; Walker, 456, 457, 462.

United States. 2227 gf
Germain, 181; Walker, 456, 457.

N.E United States. 2227 gg
Baker, 11, 12a; Marshall, 289; Pilsbry, 358; Utterback, 443; Walker, 455; Winslow, 476.

S.E. United States. 2227 gh
Clapp, 90; Cockerell, 93; Crabb, 109; Ferriss, 161; Hyning, Van, 235; Marshall, 289; Ortmann, 337; Pilsbry, 352; Vanatta, 444; Walker, 460.

W. United States. 2227 gi
Faust, 160; Ferriss, 161, 162; Henderson & Daniels, 219; Pilsbry, 349, 350, 354, 355; Pilsbry & Ferriss, 360.

Mexico. 2227 gl
Contreras, 99; Pilsbry, 356.

Guatemala. 2227 hb
Frierson, 170; Pilsbry, 352; Walker, 459.

West Indies. 2227 hc
Pilsbry, 352.

Guiana and Venezuela. 2227 hd
Pilsbry, 352.

Colombia. 2227 he
Fulton, 170d.

Peru. 2227 hf
Dall, 125.

Brazil. 2227 hg
Ihering, von, 237; Pilsbry, 357.

Argentine, Paraguay and Uruguay. 2227 hi
Doello Jurado, 146, 147; Marshall, 290.

Australia. 2227 i
Odhner, 328; Pilsbry, 352.

New Guinea, etc. 2227 ia
Kobelt, 259; Sowerby, 404.

Queensland. 2227 id
Pilsbry, 352.

New South Wales. 2227 ie
Pilsbry, 352.

Victoria. 2227 if
Hedley, 210.

South Australia. 2227 ig
Pilsbry, 352.

West Australia. 2227 ih
Pilsbry, 352.

Tasmania, etc. 2227 ii
Hedley, 213.

Atlantic. 2227 la
Olmsted, 333; Schlesch, 389–391, 393, 394.

Indian Ocean. 2227 m
Pilsbry, 352.

Pacific. 2227 n
Dall, 125; Pilsbry, 348, 352.

(b) FOSSIL.

General.
Dickerson, 139; Kennard & Woodward, 254; Øyen, 341; Wilckens, 472.

Quaternary.
Andrusov, 3; Chapman & Gabriel, 88; Commont, 96; Depéret & Joleaud, 135; Germain, 177; Johansen & Lynge, 246; Kennard & Woodward, 253, 254; Klett, 258; Krause, 262; Odhner, 328; Oldham, 329; Ritchie, 376; Wenz, 469.

Cainozoic.
Cereceda, 86; Hedley, 215; Marshall, 288; Pallary, 342; Stefanini, 418.

Pleistocene.
Blaney & Loomis, 35; Chapman & Gabriel, 88; Dall, 120; Henderson, 217; Hume, 233; Johnston, 248; Kennard, 249; Kennard & Woodward, 254, 467; Martin, 295; Thomson, 431.

Tertiary.
Doello Jurado, 149; Fischer & Wenz, 164; Herold, 220; Marshall, 285; Pilsbry, 352; Speight, 405.

Pliocene.
Bell, 24, 25; Gester, 185; Hume, 233; Oppenheim, 335; Pilsbry & Johnson, 361; Walther, 465.

Miocene.
Cossmann & Peyrot, 107; Depéret & Gentil, 134; Dickerson & Kew, 140, 141; Gentil, 174; Gester, 185; Gripp, 201; Hume, 233; Marshall, 284, 286; Martin, 293, 295; Newton, 319, 321; Nørregaard, 325; Olsson, 334; Oppenheim, 335; Shimer, 401; Stefanini, 416, 417; Wenz, 470.

Oligocene.
Dickerson, 137; Dickerson & Kew, 140; Martin, 295; Oppenheim, 335; Pilsbry & Brown, 359; Pilsbry & Johnson, 361; Stefanini, 416; Vidal, 448; Wenz, 471.

Eocene.
Boswell, 43; Dickerson, 138; Marshall, 287; Oppenheim, 335; Stefanini, 416; Vidal, 448; Waring, 466.

Cretaceous.
Allen, 2; Böhm, 37; Brun, de, 56; Cossmann, 106; Crick, 111; Douvillé, 151; Etheridge, 156; Kilian & Reboul, 255; Newton, 320; Osman, 338;

Parona, 347; Ravn, 367, 368; Revil, 372; Sheppard, 400; Trechmann, 440; Vidal, 448; Wade, 453; Waring, 466; Wilmer, 474.

Jurassic.

Bülow, von, 58; Douvillé, 151; Jaworski, 244; Lange, 274; Paris & Richardson, 345; Richardson, 375.

Triassic and Liassic.

Deecke, 133; Diener, 142; Douvillé, 151; Rassmuss, 366; Tilmann, 432; Trueman, 441.

Carboniferous.

Etheridge, 157; Girty, 191; Greger, 200; Mather, 298; Trechmann, 433.

Devonian.

Faura y Sans, 159; Gardiner, 171; Reed, 171.

Silurian.

Faura y Sans, 159; Gardiner, 171; North, 327; Reed, 171; Williams, 473.

Ordovician.

Foerste, 165; Grabau, 199.

Cambrian.

Walcott, 454.

III.—SYSTEMATIC INDEX.

2231

N.B.—The numerals in clarendon when not indicating a Volume refer to Titles.

Gastropoda.

POLYPLACOPHORA.

Chiton, BERRY, **28, 30.**

Ischnochiton with *I.* (*Lepidozona*) *amabilis* p. 6, *interfossa* p. 8, *pilsbryanus* p. 10, **spp. n.**, Japan, BERRY Proc. U. S. Nation. Mus. **54** pp. 4–12.—*I.* (*Lepidozona*) *willetti* **sp. n.** N. Pacific, BERRY Proc. Calif. Acad. Sci. **7** p. 236.—*I. conspicuus* variation, CHACE **87.**—*I.*, GATLIFF & GABRIEL **173.**

Leptochiton diomedeae **sp. n.** Japan, BERRY Proc. U. S. Nation. Mus. **54** p. 1.

Notochiton mirandus, VAYSSIÈRE **447.**

Placiphorella rufa **sp. n.** Alaska, BERRY Proc. Calif. Acad. Sci. **7** p. 241; *P. stimpsoni, borealis*, BERRY **28.**

Trachydermon, BERRY **29.**

Prosobranchia.

TEREBRIDAE, CONIDAE, TURRIDAE & CANCELLARIIDAE.

Antimitra **gen. n.** of *Turridae* (= *Mitromorpha* auctt. non Cptr.) type *Pleurotoma aegrota* Rve., IREDALE Proc. Malac. Soc. **12** p. 328.

Apaturris **gen. n.** of *Turridae* type *Mitromorpha expeditionis* Oliver, IREDALE t.c. p. 329.

Cancellaria septemcostata **sp. n.** Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 55.

†*Cancellaria gabbiana*, *C.* (*Trigonostoma*) *insularis*, **spp. n.**, Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 163.—*C. crassa* **sp. n.** Cretaceous California, WARING Proc. Calif. Acad. Sci. **7** p. 66.—*C.* (*Trigonostoma*) cf. *ampullacea* (Brocchi), BELL Geol. Mag. London **4** p. 410.

†*Clathurella* [vide etiam *Pleurotomoides*] *amica* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 158.

Clathurina **gen. n.** (= *Clathurella* auctt. non Cpr.) type *C. foraminata* (Rve) with *C. catharia, netrodes, spanionema, C. foraminata pyrgodea*, **spp.** & **var. n.** Persian Gulf, *C. tincta* var *lemniscata* **nom. n.** for *C. lemniscata* G. & H. Nev., MELVILL Proc. Malac. Soc. **12** pp. 185–190

†*Clavatula ziczac* **sp. n.** Tortonian Friuli, STEFANINI Atti Acc. Sci. Padova **8** p. 152; *C. ziczac, C. asthenotoma* aff. *heckeli* (Hoers.), STEFANINI Mem. Ist. Geol. Univ. Padova **4** pp. 53, 55.

†*Conorbis monairyensis* **sp. n.** Cretaceous Tennessee, WADE Proc. Acad. Nat. Sci. Phila. **69** p. 280.

Conus, MELVILL **302, 305.**

†*Conus ruckmani* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 179.—*C. xenicus. perlepidus* p. 159, *longitudinalis* p. 160, *simplicissimus, porcellus* p. 161, *pernodosus, gabbi* p. 162, *larvatus* p. 163, **spp. n.**, *furvoides brachys* p. 158, **subsp. n.** Oligocene Santo Domingo, *trisculptus, consobrinus ultimus* p. 160 **sp. & subsp. n.** Pliocene Costa Rica, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** pp. 158–163.—*C.* cf. *ventricosus Bronn*, BELL Geol. Mag. London **4** p. 410.—*C.*, STEFANINI **418.**

†*Daphnella multicincta, ovata* **spp. n.** Tertiary New Zealand, MARSHALL Trans. N. Z. Inst. **49** p. 457.

Defrancia vide *Pleurotomoides.*

Diaugasma **subg. n.** of *Daphnella* type *D. epicharta* (M. & St.), MELVILL Proc. Malac. Soc. **12** p. 195.

Drillia with *D. chimastrum* **sp. n.**, *D. persica jacintha* **var. n.** Persian Gulf, *D. crenularis atkinsonii, D. c. griffithii* **nomm. n.** for *Pleurotoma atkinsonii* Smith & *P. griffithii* Gray; *D. lucida* G. & H. Nev. (= *P.* (*D.*) *disjecta* Sm.), MELVILL Proc. Malac. Soc. **12** pp. 149–162.—*D. sexradiata, hololeuca,* **spp. n.**, Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) pp. 57, 58.

†*Drillia conradiana* **nom. mut.** (= *distans* Conrad 1862 non 1860), OLSSON Bull. Amer. Paleont. **5** p. 60.—*D. sororcula, subgibbosa, elocata* p. 153, *callistura, ischnatracta* p. 154, *scala, hexapleura* p. 155, *mimula, esculenta, orthopleura* p. 156, *callistopleura, foveolata,* **spp. n.**, *lissotropis dorsuosa* p. 157, **subsp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** pp. 153–158.

Lienardia mighelsi **nom. mut.** (= *Pleurotoma rugosa* Migh. non. Lea nec Desh.), IREDALE & TOMLIN J. Conch. **15** p. 216.—*L.* with *L. spurca pasniensis* **var. n.** Persian Gulf; *L. soror* Sm. (= *Clathurella opsimathes* M. & St.), MELVILL Proc. Malac. Soc. **12** pp. 181–185.

Lora vide *Pleurotomoides.*

Lovellona **gen. n.** of *Conidae* type *Conus atramentosus* Rve., IREDALE Proc. Malac. Soc. **12** p. 329.

Mangilia with *M. callicredemna, woodwardiæ* Persian Gulf, *erymna, tritaeniata* Bombay, *olivieriana* Mekran Coast, **spp. n.**, *M. horneana compar* **var. n.** Persian Gulf *M. albolabiata* var. *chilosema* and *M. smithii* var. *clarisculpta* **nomm. n.** for *M. chilosema* and *M. clarisculpta* Melv.; *M. gracilenta* (Rve.) (= *Pleurotoma contracta* Rve. *P.* (*Drillia*) *portia* Sm. & ? *Cythara elegantissima* Melv.) *M. polita* Hinds (= *Drillia continua* M. & St.) *M. pupiformis* Sm. (= *M. callistephana* Melv.), MELVILL Proc. Malac. Soc. **12** pp. 165–180.

†*Mangilia ravni* **sp. n.** Miocene Denmark, NØRREGAARD Medd. Dansk. geol. Foren. **5** (1) p. 33.

†*Metulella dominicensis* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 169.

Pleurotoma [vide etiam *Turris*] (*Gemmula*) *congener*, VREDENBERG **450.**

†*Pleurotoma* [vide etiam †*Turris*], NØRREGAARD **325.**

†*Pleurotomoides* Bronn (= *Lora* Gistel, *Clathurella* Cpr. & *Defrancia* Millet), IREDALE **238.**

†*Scobinella tristis* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 158.

Surcula [vide etiam *Turricula*] with *S. cingulifera* var. *amicta* **nom. n.** for *Pleurotoma amicta* Smith; *S. fulminata gloriosa* **var. n.** Persian Gulf, MELVILL Proc. Malac. Soc. **12** pp. 162–164.

†*Surcula* sp. Eocene California, WARING Proc. Calif. Acad. Sci. **7** p. 97.

Terebra trismacaria **sp. n.** Mekran Coast, MELVILL J. Conch. Leeds **15** p. 188.—*T.*, HIRASE **228**; MELVILL & STANDEN **306.**

†*Terebra baculiformis, hitia,* **spp. n.**, Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 152.—*T.* cf. *pertusa* Bast., NORREGAARD Medd. Dansk. geol. Foren. **5** (1) p. 31.—*T.* cf. *acuminata* Bors., *T. modesta ventricosa* **var. n.** Tortonian Veneto, STEFANINI Mem. Ist. Geol. Univ. Padova **4** pp. 43, 46.

Turricula Schum. (= *Surcula* Ads.), IREDALE **238.**

Turridae, MELVILL **300.**

Turris [vide etiam *Pleurotoma*] with *T.* (*Gemmula*) *granosa guadurensis* **var. n.** Mekran Coast; *T.* (*Tomopleura*) *nivea* varr. *violacea, makemonos* and *pouloensis* **nomm. n.** for *Pleurotoma violacea* Hinds, *P. makemonos* Jouss. and *P. pouloensis* Jouss., MELVILL Proc. Malac. Soc. **12** pp. 142–149.

†*Turris* [vide etiam †*Pleurotoma*] *multicinctus, striatus*, **spp. n.**, Tertiary New Zealand, MARSHALL Trans. N. Z. Inst. **49** pp. 456, 457.—*T. cartagenensis* **sp. n.** Oligocene Colombia, PILSBRY & BROWN Proc. Acad. Nat. Sci. Phila. **69** p. 32.—*T. plicata* **sp. n.** Cretaceous California, WARING Proc. Calif. Acad. Sci. **7** p. 68.

Tylotia **subgen. n.** of *Drillia* (= *Clavus* auctt. non Mont.) type *D. canicularis*, MELVILL Proc. Malac. Soc. **12** p. 160.

Veprecula **subgen. n.** of *Clathurina* type *C. sykesii* (M. & St.), MELVILL t.c. p. 188.

HARPIDAE, OLIVIDAE, MARGINELLIDAE, VOLUTIDAE & MITRIDAE.

†*Ancilla olivaeformis* **sp. n.** Helvetian Meduno, STEFANINI Mem. Ist. Geol. Univ. Padova **4** p. 64.

†*Boltenella* **gen. n.** of *Volutidae* type *B. excellans* **sp. n.** Cretaceous Tennessee, WADE Proc. Acad. Nat. Sci. Phila. **69** pp. 285, 286.

†*Falsifusus mezoicus* **sp. n.** Cretaceous Tennessee, WADE t.c. p. 284

Harpovoluta with *H. striatula* **sp. n.** Antarctic p. 36, VAYSSIÈRE Deux. Exp. Antarct. Fr. Moll. amph. gast. (Opisth. et Prosobr.) **1917** pp. 35–38.

†*Hyllus* **gen. n.** of *Volutidae* with *H. callilateris* type p. 282 [*callilateras* err. typ. p. 281], *coloratus* p. 283, **spp. n.**, Cretaceous Tennessee, WADE Proc. Acad. Nat. Sci. Phila. **69** pp. 281–283.

†*Lirosoma cretacea* **sp. n.** Cretaceous Tennessee, WADE t.c. p. 288.

†*Lyria hannibali, andersoni*, **spp. n.**, Eocene California, WARING Proc. Calif. Acad. Sci. **7** pp. 84, 97.

Marginella miliaris jullieni **var. n.** Liberia *M. turbiniformis* Lifou, *tomlini, bougei* Ouvea, *M.* (*Granula*) *atomella* Mascarene Is., *M.* (*Volvaria*) *roberti* Monterosato mss. Madeira, *M.* (*V.*) *hirasei* Japan, **spp. n.**, *M. mariei* Crosse (= *isseli* Nev.), BAVAY J. Conchyliol. **63** pp. 96–108.—*M.* with *M. ameliensis* (= *bivittata* Bavay 1912 non 1910) *bahiensis* (= *joubini* Bavay non Dautz. & Fischer) *sarcodes* (= *carneola* Petit non delle Ch.) *tenuilabra* (= *Bulla pallida* Donovan non Linn.) **nomm. mut.**, TOMLIN Proc. Malac. Soc. **12** pp. 247–306.—*M. avena* locomotion, OLMSTED **333.**

†*Marginella pacifica* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 178.—*M. mediocris* **sp. n.** Oligocene Colombia, PILSBRY & BROWN Proc. Acad. Nat. Sci. Phila. **69** p. 32.—*M. nugax* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 165.

Marginellidæ, TOMLIN **433.**

†*Mitra mesolia, tortuosella*, **spp. n.**, *M. t. frater* **subsp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** pp. 165–166.—*M.* cf. *fusiformis* Brocchi, BELL Geol. Mag. London **4** p. 411.—*M.* cf. *scrobiculata* Broc., NORREGAARD Medd. Dansk. geol. Foren. **5** (1) p. 28.

†*Oliva proavia, dimidiata*, **spp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** pp. 164, 165.—*O. sayana immortua* **subsp. n.** Oligocene Colombia, PILSBRY & BROWN t.c. p. 33.

†*Olivella spissa* **sp. n.** Eocene California, WARING Proc. Calif. Acad. Sci. **7** p. 85.

†*Plochelaea gabbi* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila, **69** p. 166.

†*Scobina* **gen. n.** of *Volutidae* type *S. bicarinata* **sp. n.** Cretaceous Tennessee, WADE t.c. pp. 286, 287.

FASCIOLARIIDAE, TURBINELLIDAE, BUCCINIDAE, NASSARIIDAE or ALECTRIONIDAE, PYRENIDAE, MURICIDAE & THAIDIDAE.

Acanthina calcar crassilabrum, A. c. imbricata, DOELLO JURADO **148.**

Alectrion [vide etiam *Nassa*] with *A. limacina, onchodes, polistes,* **spp. n.**, *A. insculptus eupleura* **var. n.** California and Panama, *A. fossatus* Gld. (= *Buccinum elegans* Rve. non Sow.) *A. pagoda* Rve. (= *B. decussatum* Kien. non L., *Nassa acuta* Cpr. & *N. corpulenta* C. B. Ad.), DALL Proc. U. S. Nation. Mus. **51** pp. 575–577.

†*Alectrion* [vide etiam †*Nassa*] with *A. grammatus* **sp. n.** Pleistocene California, DALL t.c pp. 575–577.

Alectrionidae, DALL **120.**

†*Alectrionidae* [vide etiam †*Nassidae*] DALL **120.**

†*Anachis gracilicostata* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 168.

Arcularia with *A. iodes* **sp. n.** (?), California; *A. scabriuscula* Powys (= *Nassa stimpsoniana* C. B. Ad.) *A. exilis* Powys (= *N. fontainei* Orb. & *N. panamensis* Phil. non C. B. Ad.), DALL Proc. U. S. Nation. Mus. **51** pp. 577–578.

Buccinella, vide *Fusinella.*

†*Buccinum inexhaustum,* BELL **24.**

Cominella radula, COOKE **101.**

†*Cominella conica* **sp. n.** Pliocene England, BELL Geol. Mag. London **4** p. 412.—*C. sublurida* **sp. n.** Tertiary New Zealand, MARSHALL Trans. N. Z. Inst. **49** p. 455.

†*Ecphora proquadricostata* **sp. n.** Cretaceous Tennessee, WADE Proc. Acad. Nat. Sci. Phila. **69** p. 293.

Euthria radula, COOKE **103.**

†*Exelissa solitudinis* **sp. n.** Jurassic Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 45.

†*Exilia weaveri* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 173.

†*Fasciolaria gabbi* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 174.—*F.* with *F. chatsworthensis* p. 97 **sp. n.** Eocene California, WARING t.c. pp, 83. 97.—*F.* cf *polygonata* Grat., STEFANINI Atti. Acc. Sci. Padova **8** p. 78.

Ficulina, vide *Notoficula.*

Fusinella **nom. mut.** (= *Buccinella* Thiele non Perry), THIELE Nachr.-Bl. D. malac. Ges. **49** p. 24.

†*Fusinus gesteri* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 179.

†*Fusus* cf. *elongatus* Nyst., STEFANINI Atti Acc. Sci. Padova **8** p. 77.

†*Heteroterma zelandica* **sp. n.** Tertiary New Zealand, MARSHALL Trans. N. Z. Inst. **49** p. 453.

Latirus niger **sp. n.** Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 50.

†*Latirus* (*Mazzalina*) *longirostris* **sp. n.** Tertiary (?) New Zealand, MARSHALL Trans. N. Z. Inst. **49** p. 455.

†*Liomesus* cf. *danicus* (von Koenen), BELL Geol. Mag. London **4** p. 412.

†*Lirosoma sulcosa multicostata* **var. n.** Miocene Virginia, OLSSON Bull. Amer. Paleont. **5** p. 45.

†*Melongena orthacantha* **sp. n.** Oligocene Santo Domingo. PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 168.—*M.*, IREDALE **238.**

†*Molopophorus stephensoni* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 177.

Murex trunculus, brandaris, JACKSON **243.**—*M.*, FULTON **170c.**

†*Murex vaughani* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 174.—*M.* cf. *sismondae* Bell., GRIPP Neu. Jahrb. Min. Stuttgart Beil. Bd. **41** (1) p. 34.

†*Nassa cornelliana* **sp. n.** Miocene North Carolina, OLSSON Bull. Amer. Paleont. **5** p. 45.

Nassarina solida **sp. n.** California, DALL Proc. U. S. Nation. Mus. **51** p. 579.

†*Nassidae* [vide etiam† *Alectrionidae*] HEROLD **220.**

Northia taxonomy, COOKE **104**.

Notoficula **nom. mut.** (= *Ficulina* Thiele non Gray) THIELE Nachr.-Bl. D. malak. Ges. **49** p. 24.

Nucella [vide etiam *Purpura*] *lapillus* teratology, COOKE **102**.

Ocinebrina inermis minima **var. n.** Gallipoli, PALLARY J. conchyliol. **63** p. 144.

†*Paramorea* **gen. n.** of *Purpuridae* type *P. lirata* **sp. n.** Cretaceous Tennessee, WADE Proc. Acad. Nat. Sci. Phila. **69** pp. 295, 296.

†*Perissolax obtusa* **sp. n.** Tertiary New Zealand, MARSHALL Trans. N. Z. Inst. **49** p. 454.

Phos with *P. chelonia* Galapagos Is. *alternatus* California, *mexicanus*, *minusculus* Panama, **spp. n.**, DALL Proc. U. S. Nation. Mus. **51** pp. 578–579.

†*Phos ordinarius*, *conica*, **spp. n.**, Tertiary New Zealand, MARSHALL Trans. N. Z. Inst. **49** p. 456.

Pollia bicolor lata **var. n.** Gallipoli, PALLARY J. conchyliol. **63** p. 144.

†*Procerithium deserti* **sp. n.** Jurassic Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 44.

Purpura [vide etiam *Nucella*] *haemostoma*, JACKSON **243a**.

†*Seminola* **gen. n.** of *Buccinidae* with *S. crassa* type p. 291, *solida* p. 292, **spp. n.**, Cretaceous Tennessee, WADE Proc. Acad. Nat. Sci. Phila. **69** pp. 290–292.

†*Sipho ravni* **sp. n.** Pliocene England, BELL Geol. Mag. London **4** p. 411.—*S. curtus*, BELL **24**.

†*Strepsidura packi* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 177.

†*Strombina cartagenensis*, *lloydsmithi*, **spp. n.**, Oligocene Colombia, PILSBRY & BROWN Proc. Acad. Nat. Sci. Phila. **69** p. 33.

†*Thais santodomingensis* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 169.

Tritonidea tincta bermudensis locomotion, OLMSTED **333**.

†*Trophon priestleyi* **sp. n.** Cainozoic Antarctic, HEDLEY Austral. Ant. Exp. 1911–1914 Geol. **2** p. 87.

†*Tudicola sulcata* **sp. n.** Tertiary New Zealand, MARSHALL Trans. N. Z. Inst. **49** p. 455.

†*Typhis harrisi* **sp. n.** Miocene Florida, OLSSON Bull. Amer. Paleont. **5** p. 46.

†*Vasum pugnus* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 167.

Volema Bolten & *Melongena* Schum., IREDALE **238**.

†*Xancus rex* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 167.

CYMATIIDAE, CASSIDIDAE, TONNIDAE, CYPRAEIDAE, STROMBIDAE, APORRHAIDAE & STRUTHIOLARIIDAE.

†*Alaria armata* **race naine** Bathonian Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 42.—*A. suteri* **sp. n.** Cretaceous New Zealand, TRECHMANN Geol. Mag. London (6) **4** p. 304.

†*Anchura* WARING **466**

†*Aporrhais gregaria*, TRECHMANN **440**.

†*Bathytoma boundeyi* **sp. n.** Eocene California, WARING Proc. Calif. Acad. Sci. **7** p. 81.

†*Columbellina fusiformis* **sp. n.** Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 132.

†*Conchothyra*, TRECHMANN **440**.

Cypræa miliaris diversa, *C. m. nivea* & *C. m. intermedia*, FULTON **170c**.—*C. pustulata* protection, MORTENSEN **311**.—*C. exanthemia* locomotion, OLMSTED **333**.—*C.*, GERMAIN **183**.

†*Cypraea* cf. *leporina* Lam., OPPENHEIM **335**.

†*Drepanochilus calcaratus ornata* **var. n.** Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 134.

Erato gemma **sp. n.** Lifou, BAVAY J. conchyliol. **63** p. 108.

†*Eutritonium* cf. *nodiferum* (Lam.), STEFANINI Mem. Ist. Geol. Univ. Padova **4** p. 74.

†*Ficula* cf. *geometra* (Bors.), BELL Geol. Mag. London **4** p. 413.

†*Ficus plectatus* **sp. n.** Eocene California, WARING Proc. Calif. Acad. Sci. **7** p. 83.

†*Galeodea dalli* **sp. n.** Oligocene Washington, DICKERSON t.c. p. 176.

Gelagna Schauf., type *Tritonium clandestinum* Ch. (= *Paralagena* Dall), IREDALE **238.**

†*Hippochrenes ampla rutoti* **var. n.** Pliocene England, BELL Geol. Mag. London **4** p. 413.

†*Malea elliptica, goliath,* **spp. n.,** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** pp. 169, 170.

Mayena **gen. n.** of *Tritonidae* type *Biplex australasia* Perry, IREDALE Proc. Malac. Soc. **12** p. 324.

Neosimnia catalinensis Berry figd., Nautilus **33** pl. v.

Ovulum protection, MORTENSEN **311.**

Paralagena vide *Gelagna.*

†*Perissoptera glabra asiatica* **race n.** Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 134.

†*Pugnellus* with *P. marshalli, waiparensis* **spp. n.,** Cretaceous New Zealand, TRECHMANN Geol. Mag. London (6) **4** pp. 302-304.—*P. rotundus* **sp. n.** Cretaceous California, WARING Proc. Calif. Acad. Sci. **7** p. 67.

†*Pyrula jamesi* **sp. n.** Miocene Virginia, OLSSON Bull. Amer. Paleont. **5** p. 47.

†*Seraphs andersoni* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 180.

†*Strombina politissima* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 168.

†*Strombus galliformis, dominator,* **spp. n.,** Oligocene Santo Domingo, PILSBRY & JOHNSON t.c. pp. 170, 171.—*S.* cf. *nodosus* Bors., OPPENHEIM **335.**

†*Struthiolaria minor* **sp. n.** Tertiary New Zealand, MARSHALL Trans. N.Z. Inst. **49** p. 451.

†*Trachytriton titan* **sp. n.** Eocene California, WARING Proc. Calif. Acad. Sci. **7** p. 87.

Triton tritonis, JACKSON **243.**

Trivia bipunctata **sp. n.** Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 53.

CERITHIIDAE, SHERBORNIIDAE, PLANAXIDAE, NERINEIDAE, TRICHOTROPIDIDAE, VERMETIDAE, TURRITELLIDAE AND CAECIDAE.

†*Astaudes* **gen. n.** of *Cerithiidae* type *A. densatus* **sp. n.** Cretaceous Tennessee, WADE Proc. Acad. Nat. Sci. Phila. **69** pp. 298, 299.

Bittium with *B. bartolemensis, santamariensis, serra* California, *challisae, sanjuanensis* British Columbia, **spp. n.,** BARTSCH Proc. U. S. Nation. Mus. **52** pp. 672-676.—*B. latreillei lineolata* **var. n.** Tenedos, PALLARY J. conchyliol **63** p. 143.

†*Bronzetia* **subg. n.** of *Itieria* type *I. sayni,* COSSMANN Mem. Soc. Geol. Fr. **21** (51) p. 12.

†*Caecum annellifer* **nom. mut.** (= *C. annulatum* Gabb non Brown), PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 172.

Campanile Fischer (= *Ceratoptilus* Bouvier) *symbolicum* **nom. mut.** (= *Cerithium leve* Q. and G. or *laeve* Gray preocc.), IREDALE Proc. Malac. Soc. **12** p. 325.

†*Campanilopa* **gen. n.** type *Cerithium giganteum* Lam., IREDALE Proc. Malac. Soc. **12** p. 325.

†*Cerithiella chateleti* **sp. n.** Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) p. 11.

Cerithiopsis with *C.* (*Cerithiopsis*) *charlottensis* British Columbia, *grippi, bakeri* California, *helena* Panama, **spp. n.,** BARTSCH Proc. U.S. Nation. Mus. **52** pp. 668-672.—*C.* (*Cerithiopsis*) *anaitis* **nom. mut.** (= *C.*(*C*) *helena* Bartsch 1917 non Bttg. 1901), BARTSCH Nautilus **31** p. 71. —*C. crocea marmorea* **var. n.** Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 47.

†*Cerithiopsis howardi* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 175.

Cerithium mysterium **nom. mut.** (= *C. tomlini* Hedley non Preston), Hedley Proc. Linn. Soc. N.S.W. **41** p. 708.—*C. attenuatum brevicaudatum* **var. n.** Australia, Odhner Vet.-Ak. Handl. Stockholm **52** (16) p. 47.

†*Cerithium* (*Uchauxia*) *mogharense, bituberculatum* **spp. n.**, Cretaceous Moghara, Douvillé Mem. Acad. Sci. Paris **54** pp. 137, 138.

†*Diastoma ornatum* **sp. n.** Cretaceous Moghara, Douvillé Mem. Acad. Sci. Paris **54** p. 139.

†*Glauconia deserti* **sp. n.** Cretaceous Moghara, Douvillé t.c. p. 139.

†*Itieria* (*Brouzetia*) *sayni* **sp. n.** Urgonian France, Cossmann Mem. Soc. Geol. Fr. **21** (51) p. 12.

†*Mrhilaia* cf. *nerinaeformis* Coq. Newton Trans. R. Soc. Edinburgh **51** p. 577.

†*Nerinea*, Cossmann **106**.

†*Nerinella bruni* **sp. n.** Urgonian France, Cossmann Mem. Soc. Geol. Fr. **21** (51) p. 15.—*N.* cf. *algarbiensis* Choff., Douvillé Mem. Acad. Sci. Paris **54** p. 146.

†*Nudivagus* **gen. n.** of *Cerithiidae* type *N. simplicus* **sp. n.** Cretaceous Tennessee, Wade Proc. Acad. Nat. Sci. Phila. **69** pp. 296, 297.

†*Phaneroptyxis cureti* **sp. n.** Urgonian France, Cossmann Mem. Soc. Geol. Fr. **21** (51) p. 12.

†*Potamides gastrodon* **sp. n.** Oligocene Santo Domingo, Pilsbry & Johnson Proc. Acad. Nat. Sci. Phila. **69** p. 171.—*P. avus* **sp. n.** Oligocene Colombia, Pilsbry & Brown t.c. p.34. —*P. promargaritaceus promoniliformis* **var. n.** Oligocene Veneto, Stefanini Atti Acc. Sci. Padova **8** p. 88.

†*Pseudomesalia* **gen. n.** of *Turritellidae* with *P. deserti* type p. 141, *bilineata, brevis* **spp. n.** Cretaceous Moghara, Douvillé Mem. Acad. Sci. Paris **54** pp. 141, 142.

†*Purpuroidea bruni* **sp. n.** Urgonian France, Cossmann Mem. Soc. Geol. Fr. **21** (51) p. 17.

Sherbornia gen. n. of *Sherborniidae* type *S. mirabilis* **sp. n.** Christmas I., Iredale Proc. Malac. Soc. **12** p. 332.

Sherborniidae **fam. n.**, Iredale Proc. Malac. Soc. **12** p. 331.

†*Terebraliopsis pustulifera* **sp. n.** Urgonian France, Cossmann Mem. Soc. Geol. Fr. **21** (51) p. 18.

†*Terebrella laevis* **sp. n.** Jurassic Moghara, Douvillé Mem. Acad. Sci. Paris **54** p. 44.

†*Triforis martini* **sp. n.** Oligocene Washington, Dickerson Proc. Calif. Acad. Sci. **7** p. 176.

Triphora bicincta **sp. n.** Australia, Odhner Vet.-Ak. Handl. Stockholm **52** (16) p. 47.

†*Turritella* with *T. cartagenensis* p. 34, *lloydsmithi* Colombia, *domingensis* p. 35 Santo Domingo, *calostemma* p. 36 Haiti, **spp. n.** Oligocene, Pilsbry & Brown Proc. Acad. Nat. Sci. Phila. **69** pp. 34-37.—*T. sulcigyrata* **sp. n.** Oligocene Santo Domingo, Pilsbry & Johnson t.c. p. 171.—*T.* with *T. reversa, simiensis* p. 88, **spp. n.** Eocene California, Waring Proc. Calif. Acad. Sci. **7** pp. 69, 87-89, 99-100.—*T. americana*, Doello Jurado 149.—*T.* Stefanini **416**; Trechmann **440**.

Vicarya, Martin **294**.

Tiaridae, Pleuroceridae, Littorinidae & Fossaridae.

Anculosa vide *Leptoxis*.

Calodonia Stef. eliminated, Pallary **342**.

Canthidomus Swains. eliminated, Pallary **342**.

Ceriphasia, Pilsbry **353**.

Goniobasis, Baker **11**.

Leptoxis Raf. (= *Anculosa* Say), Pilsbry **353**.

Littorina rudis alticola **var. n.** Scotland, Dacie J. Conch. **15** p. 180.

†*Littorina oligocenica* **sp. n.** Oligocene Washington, Dickerson Proc. Calif. Acad. Sci. **7** p. 178.

Martinia vide *Pannonia*.

†*Melania pachecoi, bolivari*, **spp. n.** Cretaceous Mallorca, Vidal Mem. R. Soc. Esp. Hist. Nat. **10** p. 352.

Melanopois with *M. moussoni* (= *brevis* Mouss. non Sow.) *moreleti* (= *brevis* Morel. non Sow.) *ducosi* (= *carinata* Gass. non Sow.) *goulvani* (= *elongata* Gass. non Fér.) *cookiania* (= *fusiformis* Gass. non Sow.) **nomm. mut.** *M. sevillensis* var. *pleuroplagia* **nom. n.** for *M. pleuroplagia* Bgt. 1884 non 1880; *M. doumeti* Let.-Bgt. (= *olivula* Bgt. non Grat.) PALLARY Bull Soc. Hist. Nat. Afr Nord. **7** pp. 70-87.

†*Melanopsis* with *M. eocenica* (= *buccinoidea* Sandb. non Oliv.) *polita* (= *buccinoidea* Cossm. non Oliv.) *aquitanica* (= *dufouri* Grat. non Fér.) *conspicua* (= *costata* Grat. non Oliv.) *cosmanni* (= *costata* Cossm. non Oliv.) *venusta* (= *nodosa* Handm. non Fér.) *doncieuxi* (= *nodosa* Donc. non Fér.) *spiridioni* (= *praemorsa* Brus. non L.) *abbreviata* (= *brevis* Donc. non Sow.) *michelottiana* (= *carinata* Michelotti non Sow.) *subaffinis* (= *affinis* Handm. non Fér.) *sublongata* (= *elongata* Donc. non Fér.) *angusta* (= *fusiformis* Handm. non Sow.) *hungarica* (= *fuchsi* Brus. non Handm. & *costata* Fuchs non Oliv.) *limbata* (= *scalaris* Handm. non Gass.) *douvillei* (= *costellata* Douv. non Fér.) *hispidula* (= *turrita* Handm. non Bgt.) *similis* (= *plicatula* Handm. non Neumayr) *dissimilis* (= *lyrata* Neumayr non Gass.) *vittata* (= *fasciata* Handm. non Gass.) *tumida* (= *obesa* Phil. non Gass) *ripajensis* (=*paulovici* Brus. non Bgt.) **nomm. mut.**, *M. bouei decorata* **var. n.**, *M. spinea* **nom. n.** for *M. bouei spinea* Sabba; *M. fossile* Gmel. (= *martiniana* Fér.) *M. fuchsi* Handm. (= *handmanni* Brus.) *M. microstoma* Edw. in Newton *nomen nudum*, PALLARY Bull. Soc. Hist. Nat. Afr. Nord **7** pp. 70-87.—*M.* cf. *impressa* Krs., STEFANINI Mem. Ist. Geol. Univ. Padova **4** p. 86.—*M. molinai, navarroi*, **spp. n.** Mesozoic Mallorca, VIDAL Mem. R. Soc. Esp. Hist. Nat. **10** pp. 353, 354.—*M. callosa curta*, CERECEDA **86**.

Pannonia nom. mut. (= *Martinia* Handm. non MacCoy) PALLARY Bull. Soc. Hist. Nat. Afr. Nord. **7** p. 76.

Pleurocera subulare Lea (= *Melania tracta, neglecta* & *intensa* Anth. & *Tryp. pallidum* & *labiatum* Lea), GOODRICH **196**.—*Pleurocera* Raf. (= *Angitrema* Hald. *pars*), PILSBRY **353**.—*P.* type, WALKER **455**.

†*Smendovia* Tournouër eliminated, PALLARY **342**.

Stylospirula Rov. eliminated, PALLARY **342**.

SOLARIIDAE, SKENEIDAE, LITIOPIDAE, RISSOIDAE, PALUDESTRINIDAE, VIVIPARIDAE, VALVATIDAE, AMPULLARIIDAE & ASSEMANIIDAE.

Alvania with *A. bartolomensis* California, *kyskaensis, dinora* Alaska, **spp n.**, BARTSCH Proc. U. S. Nation. Mus. **52** pp. 677-679.

Amnicola bakeriana, clarkei, oneida **spp. n.**, L. Oneida, PILSBRY Nautilus **31** pp. 44, 45, 46.—*A. deserta* & *neomexicana* Pilsb. figd., Nautilus **30** pl. v.

Amnicolidae BAKER **11**.

Ampullaria ampullacea sinistral, WALKER **458**.

†*Ampullaria selvensis* **sp. n.** Cretaceous Mallorca, VIDAL Mem. R. Soc. Esp. Hist. Nat. **10** p. 350.

†*Architectonica inornata* **sp. n.** Tertiary New Zealand, MARSHALL Trans. N. Z. Inst. **49** p. 452.

Bythinella scholtzii, STEENBERG **415**.

†*Bythinella thomaei* **sp. n.** Oligocene Germany, WENZ Jahrb. Nassau. Ver. Naturk. **67** p. 127.

Bythinia tentaculata, leachii, BOYCOTT **51**.—*B.*, STEENBERG **415**.

Coriandria **nom. mut.** (= *Microsetia* Monts. non Stephens) type *M. durbanensis*, TOMLIN J. Conch. **15** p. 221.

†*Discohelix biconcava, brouzetensis, pangymna*, **spp. n.**, Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) pp. 19, 20, 21.—*D. elegantula* **sp. n.** Jurassic Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 47.

†*Heliacus conicus* **sp. n.** Tertiary New Zealand, MARSHALL Trans. N. Z. Inst. **49** p. 453.

Lanistes with *L.* (*Leroya*) *farleri alirata* **var. n.** E. Africa pp. 321, 326, GERMAIN Bull. Mus. Paris **1916** pp. 317-329.

Leroya as subg. of *Lanistes*, GERMAIN **176**.

Microsetia vide *Coriandria*.

†*Omalaxis planus* **sp. n.** Tertiary New Zealand, MARSHALL Trans. N. Z. Inst. **49** p. 453.

Paludestrina jenkinsi, BOYCOTT **50, 54,** JOHANSEN **245**; *P. minuta*, KENNARD & WOODWARD **251**; *P.*, BOYCOTT **52.**

Paludestrinidae KENNARD & WOODWARD **254.**

†*Riselloidea tricarinata* **sp. n.** Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 145.

†*Rissoa epulata*, *R.* (*Alvania*) *proavia* **spp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** pp. 172, 173.

Rissoina moltezi Jamaica, *R. tomlini*, *R.* (*Stossichia*) *bougei* Ouvea **spp. n.**, BAVAY J. conchyliol. **63** pp. 109-112.

†*Solariaxis templetoni* **sp. n.** Cretaceous California, WARING Proc. Calif. Acad. Sci. **7** p. 68.

Valvata discors, GEYER **187**; *V. tricarinata perconfusa* **nom. mut.** (= *V. t. confusa* Walker non Westld.) [WALKER] Nautilus **31** p. 36.—*V.* STEENBERG **415.**

Valvatidae, BAKER **11.**

Vivipara occulta **sp. n.** Siam, FULTON Proc. Malac. Soc. **12** p. 241. *V.*, BUCHNER **57.**

Viviparidae, BAKER **11.**

CYCLOPHORIDAE, STROPHOSTOMATIDAE, VENTRICULIDAE, POMATIIDAE & ACICULIDAE.

Hedleya umbilicata **sp. n.** Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 75.

Hyalacme **subg. n.** of *Acme* type *A. similis* Reinh., HESSE Nachr.-Bl. D. malak. Ges. **49** p. 124.

†*Omphalotropis minuta* **sp. n.** Quaternary Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 99.

Pomatias elegans sex characters, BOYCOTT **48.**

Pupinella tortirostris **sp. n.** Louisade Archipelago, SOWERBY Proc. Malac. Soc. **12** p. 320.

†*Strophostomatidae* **fam. n.**, WENZ Jahrb. Nassau. Ver. Naturk. **67** p. 123

Tropidophora anceps bicincta **nat. n.** Kilwa, GERMAIN Bull. Mus. Paris **1916** p. 259.

†*Ventriculidae* **fam. n.**, WENZ Jahrb. Nassau. Ver. Naturk. **67** p. 124.

†*Ventriculus* **gen. n.** of *Ventriculidae* type *Cyclostoma dolium* Tho., WENZ t.c. p. 124.

CAPULIDAE, ADEORBIDAE, LAMELLARIIDAE, NATICIDAE & IANTHINIDAE.

†*Ampullina spiralis* **sp. n.** Tertiary New Zealand, MARSHALL Trans. N. Z. Inst. **49** p. 452.—*A. cureti*, *acrospira* **spp. n.** Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) pp. 22, 23.

†*Ampullospira gardonensis* **sp. n.** Urgonian France, COSSMANN t.c. p. 21. *A.* cf. *clementina* and cf. *ervyna* Orb., DOUVILLÉ Mem. Acad. Sci. Paris **54** pp. 144, 145.

Crepidula embryology, CONKLIN **97, 98**; *C. plana*, GOULD **197, 198.**

†*Gyrodes* with *G. compressus* p. 67 Cretaceous, *robustus* p. 84 Eocene California **spp. n.**, WARING Proc. Calif. Acad. Sci. **17** pp. 66–67, 84.

†*Hipponyx arnoldi*, *ornata* **spp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** pp. 180, 181.—*H. otiosa* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 173.—*H.*, NEWTON **320.**

Lamellariopsis turqueti, VAYSSIÈRE **447.**

Marsenina liouvillei **sp. n.** Antarctic, VAYSSIÈRE Doux. Exp. Ant. Fr. Zool. Moll. amph. gast. (Opisth. & Prosobr.) **1917** p. 31.

Marsenopsis with *M. charcoti* **sp. n.** Antarctic p. 25, VAYSSIÈRE t.c. pp. 22–27.

†*Natica finitima* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 173.—*N.* cf. *hantoniensis* Pilk., BELL Geol. Mag. London **4** p. 414.—*N.* cf. *benecki* v. Koen., NØRREGAARD Medd. Dansk. geol. Foren. **5** (1) p. 21.—*N.* (*Euspira*) *variabilis*, TRECHMANN **440.**

†*Neverita nomlandi* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 173.

Sinum californicum **sp. n.** California, OLDROYD Nautilus **31** p. 13.

†*Sinum* with *S. dickersoni* p. 86 **sp. n.** Eocene California, WARING Proc. Calif. Acad. Sci. **7** pp. 86, 99.

†*Varicigera choffati* **sp. n.** Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 143.

EPITONIIDAE.

†*Acirsa microstriata, corrugata* **spp. n.** Cretaceous Tennessee, WADE Proc. Acad. Nat. Sci. Phila. **69** pp. 299, 300.

†*Aclis* (*Amblyspira*) *bartschiana* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON t.c. p. 174.

†*Confusiscala* cf. *dupini* Orb., DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 143.

†*Dauciscala* **subg. n.** of *Scala* for *S. boriesi* Doncieux (type) & *S. potamaucensis* Clarck, DE BOURY J. conchyliol. Paris **63** p. 42.

Epitonium [vide etiam *Scala*] with *E. appressicostatum* Mexico, *densiclathratum* Washington, *emydonesus, rectilaminatum, habeli, rhytidum* Galapagos Is. *acapulcanum, cookeanum, xanatusi, arnoldi, pacis, imperforatum, lagunarum, persuturum, colpoicum, pazianum, propehexagonum, eutaenium, apiculatum, compradora, cylindricum, centronium, columbianum, montereyense, californicum, tabulatum, musidora, diegense, regum, orcuttianum, bialatum, zephyrium, basicum, roberti* California etc. *onchodes, columnella, tabogense, zeteki, imbrex, thylax, E.* (*Pictoscala*) *purpuratum* Panama **spp. n.** *E. sawinae catalinense* California **var. n.** *E.* (*Nitidoscala*) *fallaciosum* **nom. mut.** (= *S. hindsii* Cptr. 1865 non 1856), DALL Proc. U. S. Nation. Mus. **53** pp. 471–488.

†*Epitonium* [vide etiam *Scala*] *merriami* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 175.

Hemiacirsa cretacia **sp. n.** Cretaceous Tennessee, WADE Proc. Acad. Nat. Sci. Phila. **69** p. 301.

†*Nobiliscala* **subg. n.** of *Scala* type *S. foliacea* Sow., DE BOURY J. conchyliol. Paris **63** p. 60.

Pictoscala **sect. n.** of *Epitonium* type *Scalaria lineata* Say, DALL Proc. U. S. Nation. Mus. **53** p. 477.

†*Scala* [vide etiam † *Epitonium*] with *S. performosa* p. 44 **nom. mut.** (= *S. formosissima* Dall non Jeffreys) *S.* (*Cerithiscala*) *segreganda* p. 44 **sp. n.** Cotentin, DE BOURY J. conchyliol. Paris **63** pp. 13–62.—*S.* (*Epitonium*) *parvicostata, simplex* **spp. n.** Tertiary New Zealand, MARSHALL Trans. N. Z. Inst. **49** p. 451.—*S. martiniana* **nom. mut.** (= *reticulata* Martin non Solander), OLSSON Bull. Amer. Paleont. **5** p. 60.

†*Scalidae*, DE BOURY **45**.

STROMBIFORMIDAE & PYRAMIDELLIDAE.

†*Creonella* **gen. n.** of *Pyramidellidae* type *C. triplicata* **sp. n.** Cretaceous Tennessee, WADE Proc. Acad. Nat. Sci. Phila. **69** pp. 302, 303.

†*Eulima* [vide etiam † *Melanella*] *clarki* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 179.

Eulimostraca **gen. n.** of *Melanellidae* type *E. galapagensis* **sp. n.** Galapagos Is., BARTSCH Proc. U. S. Nation. Mus. **53** p. 333.

Haliella with *H. abyssicola* California, *chilensis* Chile **spp. n.**, BARTSCH t.c. pp. 336, 337.

Lambertia cookeana **sp. n.** California, BARTSCH t.c. p. 354.

Leiostraca Ads. (= *Subularia* Monts.), BARTSCH **17**.

Melanella with *M.* (*Melanella*) *dalli, monicensis, necropolitana, oldroydi, californica, hemphilli, baldra, mexicana, abreojosensis* California, *panamensis* Panama, *tacomaensis* Tacoma, *M.* (*Balcis*) *draconis, montereyensis, peninsularis, lastra, arnoldi, cosmia, halia, townsendi, berryi, prefalcata, grippi, taravali, catalinensis* California, *columbiana, comoxensis, macra* British Columbia, *ochsneri* Galapagos Is. **spp. n.** *M.* (*Melanella*) *micans borealis* Vancouver **subsp. n.**, BARTSCH Proc. U. S. Nation. Mus. **53** pp. 302–333.—*M.* with *M. thaanumi* p. 220 *kahoolawensis* p. 225 **spp. n.**

M. cumingi medipacifica p. 221 **subsp. n.** Hawaiian Is. *M. vafra* **nom. mut.** (= *Eulima inflexa* Pse. non Blainv.), PILSBRY Proc. Acad. Nat. Sci. Phila. **69** pp. 220–225.

† *Melanella* [vide etiam † *Eulima*] *gabbiana* p. 183 **sp. n.** Oligocene Santo Domingo, *M. astuta* p. 182 **nom. mut.** (= *robusta* Gabb non A. Ad.), PILSBRY & JOHNSON t.c. pp. 182–183.

Melanellidæ, BARTSCH **15.**

Niso with *N. excolpa, lomana, hipolitensis* **spp. n.** California, BARTSCH Proc. U. S. Nation. Mus. **53** pp. 348–352.

Odostomia with *O.* (*Chrysallida*) *taravali, santamariensis, O.* (*Evalea*) *valeroi, franciscana* California, *willetti* Alaska, *O.* (*Odostomia*) *orcutti* California **spp. n.**, BARTSCH Proc. U. S. Nation. Mus. **52** pp. 663–668.—*O.* (*Evalea*) *cassandra* p. 162 *cypria, hypatia* p. 163 *skidegatensis* p. 164, **spp. n.**, Canada, DALL & BARTSCH Bull. Mus. commem. Victoria B.C., **1913** [1915] pp. 162–165.—*O.*, MARTEL **291.**

†*Odostomia* with *O.* (*Evalea*) *pleioregona, orfordensis* Pliocene Oregon **spp. n.** *O.* (*E.*) *andersoni* **nom. mut.** (= *Eulimella californica* Anderson & Martin non Dall & Bartsch), BARTSCH Proc. U. S. Nation. Mus. **52** pp. 663–668.—*O. ingloria* p. 178 *myrmecoon, O.* (*Eulimastoma*) *pyrgulopsis* p. 179 *bathyraphe, O.* (*Evalea*) *vexator, O.* (*Goniodostomia*) *superans* p. 180 *circumvincta, O.* (*Parthenina ?*) *cyclocephala* p. 181 *O.* (*Odostomidea*) *bartschiana, O.* (*Chrysallida*) *dulcis* p. 182 **spp. n.** Oligocene Santo Domingo; *O. santodomingensis* p. 179 **nom. mut.** (= *polita* Gabb non Bivona nec Pse.), PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** pp. 178–182

Partulida Schauf., type *Turbo spiralis* Mont. (= *Spiralinella* Chaster), IREDALE **238.**

†*Ptycheulimella* cf. *pyramidata* (Desh.), STEFANINI Mem. Ist. Geol. Univ. Padova **4** p. 87.

†*Pyramidella forulata famelica* **subsp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 174.

Pyramidellida with *P.* (*Pharcidella*) *magdalenensis* **sp. n.** California, BARTSCH Proc. U. S. Nation. Mus. **52** pp. 637–640.

Sabinella with *S. bakeri* California, *chathamensis, meridionalis* Galapagos Is. **spp. n.**, BARTSCH Proc. U. S. Nation. Mus. **53** pp. 333–336.

Spiralinella vide *Partulida.*

Strombiformis with *S. alaskensis* Alaska, *riversi, californica, townsendi, lapazana, almo, barthelowi, hemphilli, burragei* California, *panamensis* Panama, **spp. n.**, BARTSCH t.c. pp. 339–348.—*S. lapazana* figd., BARTSCH **17.**

†*Strombiformis praelubrica, ischnon, S.* (*Subularia*) *stimulus*, **spp. n.**, Oligocene Santo Domingo; *S. sarissiformis* **nom. mut.** (= *Eulima acicularis* Gabb non A. Ad.), PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 183.

Subularia vide *Leiostraca.*

Turbonilla with *T.* (*Strioturbonilla*) *canadensis* Alaska, *barkleyensis* Vancouver, *montezuma, santamariana, doredona, redondoensis, schmitti, T.* (*Pyrgolampros*) *franciscana, tremperi* California, *pugetensis* Seattle, *T.* (*Pyrgisculus*) *guilleni, T.* (*Pyrgiscus*) *dora, ina, ista, eva, almejasensis, bartolomensis, lamna, mariana, lazaroensis, cortezi, tecalco, corsoensis, baegerti, ulloa, cabrilloi, T.* (*Cingulina*) *urdeneta, T.* (*Mormula*) *sebastiani, viscainoi, T.* (*Ugartea*) *juani* California, **spp. n.**, BARTSCH Proc. U. S. Nation. Mus. **52** pp. 640–663.—*T.* (*Pyrgisus*) *hecuba* **sp. n.** Nova Scotia, DALL & BARTSCH Bull. Mus. commem. Victoria B.C. **1913** [1915] p. 161.

†*Turbonilla* with *T.* (*Pyrgolampros*) *hannibali* Oregon, *T.* (*P.*) *hemphilli* California, **spp. n.**, Pliocene, BARTSCH Proc. U. S. Nation. Mus. **52** pp. 640–663.—*T. polaris* **sp. n.** Cainozoic Antarctic, HEDLEY Austral. Ant. Exp. 1911–1914 Geol. **2** p. 86.—*T.* with *T.* (*Pyrgiscus*) *beatula* p. 174 *santodomingensis* p. 175, *T.* (*Chemnitzia*) *galeata, peraequa* p. 175, *T.* (*Nisiturris*) *aratibacillum, insititia* p. 176 *undecimcostata, contexta* p. 177, *T.* (*Tragula*) *egressa* p. 178, **spp. n.**, Oligocene Santo Domingo, *T.* (*Nisiturris ?*) *angustula* **nom. mut.** (= *angusta* Gabb non Cpr.), PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** pp. 174–178.

Ugartea **subgen. n.** of *Turboxilla* type *T. juani*, BARTSCH Proc. U. S. Nation. Mus. **52** p. 662.

NERITIDAE, NERITOPSIDAE, TURBINIDAE, COLLONIIDAE, TROCHIDAE, PICKWORTHIIDAE, REYNELLONIDAE & ORBITESTELLIDAE.

Adriaria Monterosato ms. **sect. n.** of *Gibbula* type *G. albida* Gmel., PALLARY J. conchyliol. **63** p. 145.

Alcyna with *A. kapiolaniae* p. 212, *A. kuhnsi*, *A. k. humerosa* p. 211, *A. subangulata virgata*, *A. s. flammulata* p. 213, **spp. subspp.** & **var. n.**, Hawaiian Is., PILSBRY Proc. Acad. Nat. Sci. Phila. **69** pp. 209–213.

†*Amphitrochus mogharensis*, *A. m. costata* **sp.** & **var. n.** Jurassic Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 46.

Anxietas **gen. n.** of *Trochidae* type *A. perplexa* **sp. n.** Christmas I., IREDALE Proc. Malac. Soc. **12** p. 334.

†*Astraea domingensis* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 184.

†*Astralium* (*Calcar*) *degrangei* Bial. ms. **sp. n.** Miocene France, COSSMANN & PEYROT Actes. Soc. linn. Bordeaux **69** p. 331.

†*Ataphrus asiaticus* **sp. n.** Jurassic Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 48.

†*Bolma* with *B. subfimbriata* Tournouer in sch. p. 338 **sp. n.** Burdigalian France; *B.* (*Ormastralium*) *carinata*, race *labiosa* p. 343 **nom. n.** for *Trochus labiosus* Grat., COSSMANN & PEYROT Actes. Soc. linn. Bordeaux **69** pp. 334–344.

†*Calliostoma bruni* **sp. n.** Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) p. 26.—*C.* with *C. tournoueri* p. 303 *benoisti* p. 305 *peyreirense* p. 306 *C.* (*Strigosella*) *burdigalicum* p. 310 *gymnospira* p. 316 *subtilestriatum* p. 317, **spp. n.**, *C.* (*S.*) cf. *turgidulum* & *miliare* Brocchi, Miocene France, COSSMANN & PEYROT Actes. Soc. linn. Bordeaux **69** pp. 296–320.—*C. tuomeyi* **nom. mut.** (= *armillatum* Tuo.-Holmes non Wood), OLSSON Bull. Amer. Paleont. **5** p. 60.

†*Chrysostoma selwynensis* **sp. n.** Cretaceous New Zealand, TRECHMANN Geol Mag. London (6) **4** p. 299.

†*Circulus domingensis* **nom. mut.** (= *striatus* Gabb non Phil.), PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 184.

†*Cirsochilus*, COSSMANN & PEYROT **107.**

Clanculus johnstoni **sp. n.** Queensland, HEDLEY Proc. R. Soc. Queensland **29** p. 55.

†*Collonia* with *C. aturensis* p. 356, *C.* (*Circulopsis*) *degrangei* p. 358, *C.* (*Parvirota*) *duvergieri* p. 359, Miocene France, **spp. n.**, COSSMANN & PEYROT Actes. Soc. linn. Bordeaux **69** pp. 354–360.

†*Colloniidae* **fam. n.**, COSSMANN & PEYROT t.c. p. 354.

†*Curetia helicinoides* **sp. n.** Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) p. 30.

Delphinula distorta zonata **var. n.** Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 45.

†*Discopsis* (?) *naso* **nom. mut.** (= *Adeorbis carinata* Gabb non A. Ad.), PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 184.

†*Euconospira missouriensis* coloration, GREGER **200.**

†*Eumargarita* (*Periaulax*) *raulini* **sp. n.** Miocene France, COSSMANN & PEYROT Actes Soc. lin. Bordeaux **69** p. 292.

Gabrielona **gen. n.** of *Phasianellidae* type *P. nepeanensis* Gat. & Gabr., IREDALE Proc. Malac. Soc. **12** p. 327.

†*Gibbula* (*Steromphalus*) *degrangei*, *fereclausa* Miocene France, **spp. n.**, COSSMANN & PEYROT Actes Soc. linn. Bordeaux **69** pp. 285, 286.

Hiloa **sect. n.** of *Phasianella* for *P. thaanumi*, PILSBRY Proc. Acad. Nat. Sci. Phila. **69** p. 207.

Liotia dautzenbergi **sp. n.** Ouvea, BAVAY J. conchyliol. **63** p. 112.

†*Metriomphalus orientalis* **sp. n.** Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 145.

†*Monodonta pachyodon* **sp. n.** Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) p. 28.

Nerita melanotragus animal, HEDLEY **209.**

†*Nerita bruni* **sp. n.** Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) p. 24.

†*Neritina* [vide etiam *Theodoxus*] *dal-piazi* **sp. n.** Tortonian Veneto, STEFANINI Atti Acc. Sci. Padova **8** p. 153 and Mem. Ist. Geol. Univ. Padova **4** p. 102.

†*Neritopsis* (?) *speighti* **sp. n.** Cretaceous New Zealand, TRECHMANN Geol. Mag. London (6) **4** p. 300.

†*Norrisella miocaenica* **sp. n.** Miocene France, COSSMANN & PEYROT Actes Soc. linn. Bordeaux **69** p. 288.

Orbitestella **gen. n.** type *Cyclostrema bastowi* Gatl., IREDALE Proc. Malac. Soc. **12** p. 327.

Orbitestellidae **fam. n.** IREDALE t.c. p. 327.

†*Pareuchelus fossariopsis* **sp. n.** Miocene France, COSSMANN & PEYROT Actes Soc. linn. Bordeaux **69** p. 326.

Phasianella with *P.* (*Hiloa*) *thaanumi* p. 209, *P.* (*Tricoliella*) *bryani*, *molokaiensis*, *variabilis kahoolawensis* p. 208, **spp. & subsp. n.**, Hawaiian Is., PILSBRY Proc. Acad. Nat. Sci. Phila. **69** pp. 207–209.

†*Phasianella* with *P.* (*Steganomphalus*) *dollfusi* p. 351 **sp. n.** Aquitanian France, COSSMANN & PEYROT Actes Soc. linn. Bordeaux **69** pp. 345–354.

†*Phorculus burdigalensis* **sp. n.** Miocene France, COSSMANN & PEYROT t.c. p. 290.

Pickworthia **gen. n.** of *Pickworthiidæ* with *P. kirkpatricki* type & *P. andrewsi*, **spp. n.**, Christmas I., IREDALE Proc. Malac. Soc. **12** pp. 332–333.

Pickworthiidae **fam. n.**, IREDALE t.c. p. 332.

†*Pileolus inaequicostatus* **sp. n.** Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) p. 25.

†*Pseudonina reyli* **nom. mut.** (= *Trochus thorinus* Benoist non Grat.), COSSMANN & PEYROT Actes Soc. linn. Bordeaux **69** p. 363.

Reynellona **gen. n.** of *Reynellonidae* type *R. natalis* **sp. n.** Christmas I., IREDALE Proc. Malac. Soc. **12** p. 333.

Reynellonidæ **fam. n.**, IREDALE t.c. p. 333.

†*Solariella duvergieri*, *contabulata* Miocene France, **spp. n.**, COSSMANN & PEYROT Actes Soc. linn. Bordeaux **69** pp. 293, 295. *S. shackefordensis* **sp. n.** Miocene Virginia, OLSSON Bull. Amer. Paleont. **5** p. 47.

†*Teinostoma* (*Solariorbis*) *variabilis* **sp. n.** Miocene Virginia, OLSSON t.c. p. 48.

Theodoxus [vide etiam *Neritina*] *eudeli* **sp. n.** Phu-Yen, SOWERBY Proc. Malac. Soc. **12** p. 320.

Trochus niloticus, HEDLEY **212.**

†*Trochus* cf. *perianus* Orb., JAWORSKI Neu. Jahrb. Min. Stuttgart Beil. Bd. **40** p. 449.—*T. bomasensis* **sp. n.** Miocene Java, MARTIN Samml. Geol. Reichsmus. Leiden **2** p. 261.—*T.* (*Tectus* ?) *crassiplicatus* **sp. n.** Lias Peru, TILMANN Neu. Jahrb. Min. Stuttgart Beil. Bd. **41** p. 677. —*T. vistulae* ?, RAYN **368.**

†*Turbo* (*Senectus*) *neuvillei* **sp. n.** Miocene France, COSSMANN & PEYROT Actes Soc. linn. Bordeaux **69** p. 324.—*T. deningeri* **sp. n.** Miocene Java, MARTIN Samml. Geol. Reichsmus. Leiden **2** p. 261.

STOMATIIDÆ, HALIOTIDAE, PLEUROTOMARIIDAE & FISSURELLIDAE.

Gena strigosa minor **var. n.** Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 43.

Haliotis ecology, TOWNSEND **438.**

Megathura Pilsb. (= *Macrochasma* Dall), IREDALE **238.**

†*Pleurotomaria* cf. *subfasciata* Orb., JAWORSKI Neu. Jahrb. Min. Geol. Paläont. Stuttgart Beil. Bd. **40** p. 424.

†*Scissurella euglypta*, HEDLEY **215.**

Scutus with *S. astrolabeus* **nom. mut.** (= *Parmophorus australis* Q. & G. non Lam.), HEDLEY Proc. Linn. Soc. N. S. W. **41** pp. 704–706.

†*Trochotoma barremica* **sp. n.** Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) p. 29.

Tugalia with *T. bascauda* **sp. n.** New Zealand etc., HEDLEY Proc. Linn. Soc. N. S. W. **41** pp. 695–699.

ACMAEIDAE AND PATELLIDAE.

Acmaea with *A. parasitica* p. 419 **sp. n.** Chile, THIEM Jenaische Zeitschr. **54** pp. 415–420.

†*Acmæa simplex* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 181.

Helcioniscus ardosiaeus anatomy, THIEM **429**.

Nacella anatomy, THIEM **429**.

Patella vulgata anatomy, THIEM **429**; *P. vulgata, depressa*, COOKE **100**; *P.*, KRUMBACH **263**.

†*Patella subquadrata* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 182.

Scurria, THIEM **429**.

†*Scurria asymmetrica* **sp. n.** Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) p. 30.—*S. peruana* **sp. n.** Lias Peru, TILMANN Neu. Jahrb. Min. Stuttgart Beil. Bd. **41** p. 676.

INCERTAE SEDIS.

†*Trajanella brevispira* **sp. n.** Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 140.

Opisthobranchia (including PTEROPODA AND HETEROPODA).

†*Actaeon parvum* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 172.—*A.* sp. aff. *reticosa*, NØRREGAARD Medd. Dansk geol. Foren. **5** (1) p. 35.—*A. merriami* **sp. n.** Eocene California, WARING Proc. Calif. Acad. Sci. **7** p. 81.—*Acteon semispiralis, subovalis*, **spp. n.**, Tertiary New Zealand, MARSHALL Trans. N. Z. Inst. **49** pp. 457, 458.—*A. subtornatilis* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 150.

Acteocina with *A. honoluluensis* p. 216 **sp. n.** Honolulu, PILSBRY Proc. Acad. Nat. Sci. Phila. **69** pp. 215–216.

†*Acteocina subbullata* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 150.

†*Acteon* vide †*Actaeon*.

†*Acteonnella gracilis* **sp. n.** Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 147.

†*Akera gregoryi* **sp. n.** Cretaceous Angola, NEWTON Trans. R. Soc. Edinburgh **51** p. 578.

Anopsia Gist. (= *Verrillopsyche* Cossm., *Halopsyche* Kfstn. preocc. & *Psyche* Rang preocc.), IREDALE **238**.

†*Aplustrum*(?) *selwynensis* **sp. n.** Cretaceous New Zealand, TRECHMANN Geol Mag. London (6) **4** p. 337.

Aplysia punctata nervous system, GÖTHLIN **193**.—*A. californica* locomotion, PARKER **346**.

Arcidoris tuberculata antarctica, A. granulatissima **var. & sp. n.** Antarctic. VAYSSIÈRE Deux. Exp. Antarct. Fr. Moll. amph. gast (Opisth. et Prosobr.) **1917** pp. 16, 17.

Atys with *A. kuhnsi* p. 216, *cornuta* p. 217, **spp. n.**, Hawaiian Is., PILSBRY Proc. Acad. Nat. Sci. Phila. **69** pp. 216–219.

†*Atys cinctorii, sulculorum*, **spp. n.**, Oligocene Santo Domingo, PILSBRY & JOHNSON t.c. p. 152.

Bulla tenuisculpta **sp. n.** Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 12.

Cephalobrachia bonnevii **sp.n.** N. Atlantic, MASSY Sci. Proc. R. Dublin Soc. **15** p. 237.

Ceratosoma corallinum **sp.n.** Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 60.

Chioraera with *C. dalli* p. 147 **sp.n.** British Columbia, HEATH Proc. Acad. Nat. Sci. Phila. **69** pp. 137–148.

Chromodoris zebra, CROZIER, **113, 115, 116, 117**.—*C.* glands, CROZIER **112**.

Clione limacina, BIGELOW **33**.

Clionopsis longecirrata **sp. n.** N. Atlantic, MASSY Sci. Proc. R. Dublin Soc. **15** p. 235.

Cuvierina columnella anatomy, BONNEVIE **42**.

Cybulia peronii spermatogenesis, SCHITZ **387**.

†*Cylindrites deserti* **sp. n.** Bajocian Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 28.

Doridopsis guttata **sp. n.** Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 62.

Euribia vide *Hydromyles.*

Gleba chrysosticta spermatogenesis, SCHITZ **387.**

Halopsyche vide *Anopsia.*

Haminea aperta oahuensis Oahu, *H. curta tomaculum* Honolulu **subspp. n.,** PILSBRY Proc. Acad. Nat. Sci. Phila. **69** p. 219.

†*Haminea cingulata* **sp. n.** Miocene New Zealand, MARSHALL Trans. N.Z. Inst. **49** p. 458.

Hermaea dendritica, EVANS & EVANS **158.**

Hydromyles Gist. (= *Theceurybia* Kfstn. & *Euribia* Rang preocc.), IREDALE **238.**

†*Hyolithellus hectori* **sp. n.** Cambrian British Columbia, WALCOTT Smithsonian Misc. Coll. **67** p. 27.

†*Hyolithes cecrops* **sp. n.** Cambrian British Columbia, WALCOTT t.c. p. 27.

Lamellidoris aspera, EVANS & EVANS **158.**

Limacina, BIGELOW **33.**

Madrella ferruginosa anatomy, ODHNER **328.**

Newnesia antarctica anatomy, VAYSSIÈRE **447.**

Notodiaphana **nom. mut.** (= *Diaphanella* Thiele non Cless.) THIELE Nachr. Bl. D. malac. Ges. **49** p. 23.

†*Nucleopsis major* **sp. n.** Eocene New Zealand, MARSHALL Trans. N.Z. Inst. **49** p. 458.

Pneumodermopsis with *P. oligotyla.* **sp.n.** N. Atlantic, MASSY Sci. Proc. R. Dublin Soc. **15** pp. 227–234.—*P. ciliata* spermatogenesis, SCHITZ **387.**

Psyche vide *Anopsia.*

Pteropoda, MASSY **297.**

Pupa thaanumi **sp. n.** Honolulu, PILSBRY Proc. Acad. Nat. Sci. Phila. **69** p. 214.

†*Retusa frigida* **sp. n.** Cainozoic Antarctic, HEDLEY Austral. Ant. Exp. 1911–1914 Geol. **2** p. 88.—*R. biforis* **sp.n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 151.

Rhizorus Montf. (= *Volvula* Ads. & *Volvulella* Newton), HEDLEY **209.**

†*Ringinella chateleti* **sp. n.** Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) p. 11.

Scyllaea lamyi **sp. n.** Antarctic, VAYSSIÈRE Deux. Exp. Antarct. Fr. Moll. amph. gast. (Opisth. et Prosobr.) **1917** p. 19.

Spongeobranchaea polycotyla **sp. n.** N. Atlantic, MASSY Sci. Proc. R. Dublin Soc. **15** p. 234.

Theceurybia vide *Hydromyles.*

Thiliptodon atlanticus, rotundatus, **spp.n.,** N. Atlantic, MASSY Sci. Proc. R. Dublin Soc. **15** pp. 238, 239

†*Tornatellea brevicula* **sp. n.** Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 147.

†*Tornatina evoluta* **sp. n.** Eocene California, WARING Proc. Calif. Acad. Sci. **7** p. 99.

Trevelyana marginata **sp. n.** Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 62.

Verrillopsyche vide *Anopsia.*

Volvaria lubrica type TOMLIN **434.**

†*Volvula* [vide etiam *Rhizorus*] *ornata, parallela, cylichnoides,* **spp.n.,** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 151.

Volvulella vide *Rhizorus.*

Pulmonata.

TESTACELLIDAE.

Ennea (*Ptychotrema*) *mucronata minor* **var.n.** West Africa, GERMAIN Ann. Mus. Civ. Genova **7** p. 198.

Enneidae, GERMAIN **184.**

Glandina guttata biology, VAYSSIÈRE **445.**

†*Palaeoglandina* **subg.n.** of *Poiretia* type *P. gracilis* (Ziet.), WENZ Jahrb. Nassau. Ver. Naturk. **67** p. 38.

†*Poiretia* with *P.* (*Pseudoleacina*) *producta subcylindrica* p. 42 **var.n.** Oligocene Germany; *P.* (*Palaeoglandina*) *gracilis* Ziet. (= *spectabilis* Tho. *inflata* Reuss. *antiqua* v. Klein & *cancellata* Sandb.), WENZ t.c. pp. 37–44.

†*Pseudoleucina* subg.n. of *Poirctia* type *P. sandbergeri* (Tho.), WENZ t.c. p. 40.

†*Testacella sandbergeri* sp.n. Oligocene Germany, WENZ t.c. p. 36.

LIMACIDAE, PHYLOMYCIDAE AND ZONITIDAE.

Agriolimax agrestis, BAKER **12a.**

Ambloxis Raf. (= *Melanthe* Bowd. & *Campeloma* Raf.), PILSBRY **353.**

†*Archaegopis* subg.n. of *Zonites* type *Z. discus* Tho. (= *T. imbricata* Sandb.), WENZ Jahrb. Nassau. Ver. Naturk. **67** p. 49.

Arion ater nervous system, GÖTHLIN **193**, synonymy, NOBRE **324.**

Arionidae, SICH **402.**

Ariophanta infausta anatomy, GODWIN-AUSTEN **192.**

? *Atopos* (*Prisma*) *australis* anatomy, ODHNER **328.**

Campeloma vide *Ambloxis*.

Geodiaphana nom. mut. (= *Diaphanella* Hesse non Cless.) THIELE Nachr.-Bl.D. malac. Ges. **49** p. 23.

Helicarion bullaceus sp.n. Queensland, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 77.

Helicarionidae, GERMAIN **184.**

Hemiplecta foersteri, KOBELT **259.**

Hemphillia malonei sp.n. Oregon, PILSBRY Nautilus **30** p. 117.

Limacidae, SICH **402.**

Limax arborum subrufa in Colorado, COCKERELL **92.**—*L. maximus* oogenesis, FISCHER **163.**

Melanthe vide *Ambloxis*.

Macrochlamys suturalis sp.n. Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 81.

Microcystis with *M. fulva* sp.n. Australia, ODHNER t.c. p. 78.

†*Microcystis antiqua* sp.n. Quaternary Australia, ODHNER t.c. p. 97.

†*Pachymilax sandbergeri* Bttg. ms. sp.n. Oligocene Germany, WENZ Jahrb. Nassau. Ver. Naturk. **67** p. 45.

Phylomycus (*Pallifera*) *arizonensis* sp. n. Arizona, PILSBRY Nautilus **30** p. 119.

Sitala quadricarinata sp.n. Borneo, GUDE Proc. Malac. Soc. **12** p. 315.

Trochonanina (*Martensia*) *germaini depressa* mut.n. Kilwa, GERMAIN Bull. Mus. Paris 1916 p. 250.—*T.* (*Trochozonites*) *ibuensis albocarinata* var.n. Fernando-Poo, GERMAIN Ann. Mus. Civ. Genova **7** p. 220.

Vitrea (*Paravitrea*) *conecuhensis* sp.n. Alabama, CLAPP Nautilus **30** p. 138.—*V. lucida*, CARTER **61.**

Vitrina pyrenaica & *V. hibernica*, KENNARD & WOODWARD **254.**

Zonites (*Aegopis*) *obenbergeri* sp.n. Dalmatia, FRANKENBERGER Nachr.-Bl. D. malak. Ges. **49** p. 24.—*Z. festae* sp.n. Rhodes I., POLLONERA Boll. Mus. Zool. Torino **31** (716) p. 3.—*Z. algirus* feeding habits, VIGNAL **449.**

Zonitidae, KENNARD & WOODWARD **254.**

ENDODONTIDAE.

Endodonta (*Thaumatodon*) *tomlini* sp. n. Guam, GUDE Proc. Malac. Soc. **12** p. 317.—*E.* (*Charopa*) *tumida, intermedia*, spp. n., Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) pp. 72, 85.

Flammulina cumulus sp. n. Queensland, ODHNER t.c. p. 84.

HELICIDAE & ACANTHINULIDAE.

Acanthinula [vide etiam *Helix*] genitalia, BOYCOTT **49, 53,** STEENBERG **414.**

Acanthinulidae fam. n. for *Acanthinula* and *Vallonia*, STEENBERG Vid. Medd. Dansk naturh. Foren. **69** p. 14.

Albea mayrani corrugata var. n. Morocco, PALLARY J. Conchyliol. **63** pp. 130–141.

Archelix with *A.* (*Atlasica*) *massesylica* cum var. *minor*, *A. le chatelieri*, *cavelliana*, *slessica*, *galiyana* cum. varr. *minor*, *bidenticulata*, *vernicata*, spp. and varr. n. Morocco; *A. polita* Gass. nom. n. for *H. lactea polita* Gass. (= *H. lucentumensis* Bgt. and *H. punctata maurula* Kob.) *A. p. mahroufiana* var. n. Morocco *A. lariollei* var. *pauli* (= *A. pauli* Dautz. non Bgt.) *A.* (?) *minettei* sp. n. Morocco, PALLARY J. Conchyliol. **63** pp. 130–141.

Ariophanta (*Hemiplecta*) *inclinata*, FULTON **170c.**

Ashfordia **gen. n.** Type *H. granulata* Alder, TAYLOR Mon. L. and F. W. Moll. British Isles pt. **23** p. 69.

Ashmunella with *A. binneyi* p. 91 *mendax* p. 92 *cockerelli p.* 90, **spp. n.**, *A. c. perobtusa, argenticola* p. 91 *A. tetrodon fragilis, animorum* p. 89, **subspp. n.**, New Mexico, PILSBRY & FERRISS Proc. Acad. Nat. Sci. Phila. **69** pp. 88-93.

Atlasica **subsect. n.** of *Archelix* type *A. atlasica* Mssn., PALLARY J. conchyliol. **63** p. 133.

Campylæa (*Liburnica*) *nicolai* genitalia; FRANKENBERGER **168.**—*C.*, CAZIOT **82, 85.**

Cepaea [vide etiam *Helix*] *hortensis*, SCHLESCH **394.**—*C. austriaca* at Mühlhausen, W. **451.**

†*Cepaea alloiodes* (Tho.) (= *H. deflexa* Sandb. and *noae* Tho.), WENZ **164.**

Cepolis ovumreguli and *lucipeta* habits, HENDERSON **218.**

Chloritis bilabiata **sp. n.** Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 85.—*C.* (*Sulcobasis*) *keysseri*, *C.* (*Sphaerospira*) *huoni*, KOBELT **259.**

†*Cyrtochilus affinis* (Tho.) (= *Helix expansilabris* Sandb.), WENZ **164.**

Epiphragmophora callistoderma Pilsb. and Ferr. **sp. n.** California [without characters], FERRISS Nautilus **31** p. 33 pl. vii. f. 3.—*E. callistoderma* genitalia, PILSBRY Proc. Acad. Nat. Sci. Phila. **69** p. 47.—*E. fidelis* albinistic, MALONE **280.**

Eulota [vide etiam *Helix*] *luhuana, quæsita* and *perryi*, FULTON **170c.**—*E. similaris* locomotion, OLMSTED **333.**—*E. fruticum*, KENNARD & WOODWARD **250.**

Everctlia robusta **sp. n.** Borneo, GUDE Proc. Malac. Soc. **12** p. 315.

Fruticicola [vide etiam *Helix*] *biconica* **sp. n.** Switzerland, EDER Nachr.-Bl. D. malak. Ges. **49** p. 119 and Rev. Suisse Zool. **25** p. 441.

Geotrochus ogeramuensis, KOBELT **259.**

Helicella itala, BOWELL **46.**—*H. ericetorum* in Sweden, HOLMQUIST **229.**—*H. virgata*, JACKSON **243.**—*H. neglecta*, KENNARD & WOODWARD **252.**

Helicidae, KENNARD & WOODWARD **254.**

Helix (*Murella*) *serpentina sarda* **var. n.**, Sardinia CAZIOT Bull. Soc. Zool. Fr. **41** p. 79.—*H. ericetorum* Geoffroy non Müll, CAZIOT **80.**—*H. simplicula* and *H. annai*, CAZIOT **81.**—*H. pyramidata*, CAZIOT **84.**—*H.* (*Fruticicola*) *rubiginosa ehrmanni* **var. n.** Germany, MÜLLER Nachr.-Bl. D. malak. Ges. **49** p. 27.—*H.* (*Eulota*) *inchoata* Morel. (= *brigantina* Mengo), NOBRE **324.**—*H. aspersa* anatomy, GATENBY **172.**—*H. pomatia* nervous system, HUNTZE **234**, hibernation, ROOS **382**, seminal cells, SCHEGOLEV **388.**—*H. nemoralis pseudoaustriaca, H. n. marginata*, SCHMID **398.**—*H. n.*, STAMM **410**, TRUEMAN **442.**—*H.* (*Acanthinula*) *harpa*, SCHLESCH **389.**—*H. hispida mörchi*, SCHLESCH **396.**—*H. hortensis*, SWANTON **421.**—*H.*, variation in size BUCHNER **57.**

†*Helix* cf. *delphinensis* Font. STEFANINI Mem. Ist. Geol. Univ. Padova **4** p. 39.—*H. binisalemi* **sp. n.** Mesozoic Mallorca, VIDAL Mem. R. Soc. Esp. Hist. Nat. **10** p. 356.

†*Hemistenotrema quadrisinuosa* **var.** *heydeni* **nom. n.** for *H. heydeni* Bttg., WENZ Jahrb. Nassau. Ver. Naturk. **67** p. 64.

Hygromia [vide etiam *Helix*] *umbrosa* with *H. u. rubra* **var. n.** Salzburg, TAYLOR Mon. L. and F. W. Moll. British Isles pt. **23** pp. 65-68.—*H. striolata*, TAYLOR **425, 426, 427.**—*H. revelata*, TAYLOR **426**, TOMLIN **437.**

†*Lychnopsis* **gen. n.** of *Helicidae* type *L. bofilli* **sp. n.** Mesozoic Mallorca, VIDAL Mem. R. Soc. Esp. Hist. Nat. **10** pp. 357, 358.

†*Lychnus hermitei* **sp. n.** Mesozoic Mallorca, VIDAL t.c. p. 356.

Macularia, CAZIOT **83.**

†*Omphalosagda goldfussi depressa* **var. n.** Oligocene Germany. WENZ Jahrb. Nassau Ver. Naturk. **67** p. 52.

Oreohelix pilsbryi **sp. n.** Carolina FERRISS Nautilus **30** p. 102.—*O. handi* **sp. n.** Nevada, FERRISS Nautilus **31** p. 33.—*O.* with *O. swopei* **sp. n.** p. 93 *O. metcalfei concentrica, radiata* p. 97 *acutidiscus, hermosensis* p. 98 *cuchillensis* p. 99 **subspp. n.** New Mexico, *O. pilsbryi* Ferriss figured, PILSBRY & FERRISS Proc. Acad. Nat. Sci. Phila. **69** pp. 93-102. *O.*, genitalia, PILSBRY **349.** — *O.*, HENDERSON & DANIELS **219.**

Oxychona PILSBRY **357**.

Papuina caput serpensis, finisterrensis, KOBELT **259**.

†*Planispira praehadra* **sp. n.** Quaternary Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 97.

Polygyra labrosa fimbriata **var. n.** Arkansas, *P. albolabris* and *zaleta*, CLAPP Nautilus **30** pp. 139-140.—*P. texasiana tillandsiae* **subsp. n.** Texas, COCKERELL Nautilus **31** p. 36.

Pseudhelicarion fastigata **sp. n.** Guam, GUDE Proc. Malac. Soc. **12** p. 316.

†*Pyramidula* (*Gonyodiscus*) *bohemica* **sp. n.** (= *Helix multicostata* Auctt. non Tho.) Oligocene Bohemia, WENZ Jahrb. Nassau Ver. Naturk. **67** p. 57.

Sonarella roosevelliana **sp. n.** Arizona, BERRY Nautilus **31** p. 14.

†*Strobilops fischéri* **sp. n.** (= *diptyx* "Klika" Bttg. non Klika) Cainozoic Germany, WENZ Jahrb. Nassau. Ver. Naturk. **67** p. 107.

Theba with *T. cantiana tenuis* England *T. c. major* Europe, **varr. n.** *T. cartusiana scalare* **monstr. n.**, TAYLOR Mon. L. and F. W. Moll. British Isles pt. **23** pp. 77-111.

Thersites castanea **sp. n.** Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 87.

Trichodiscina crinita **sp. n.** Colombia, FULTON Proc. Malac. Soc. **12** p. 240.

†*Tropidomphalus arnoldi* (Tho.) (= *Helix lepidotricha* Sandb.), WENZ **164**.

Vallonia pulchella **var.** *costata* anatomy, STEENBERG **414**.

Xerophila, TAYLOR **424**.

Zachrysia ramsdeni Pilsb. and *Z. emarginata* Pfr. figd, Nautilus **31** pl. vii.

BULIMIDAE & BULIMULIDAE.

Amphidromus with *A. malindangensis, apoensis, basilanensis, floresi, mearnsi, bilatanensis, hidalgoi, suluensis, mindoroensis*, **spp. n.**, *A. maculiferus cataganensis, A. m. cotobatensis, A. m. buluanensis, A. m. boholensis, A. m. samarensis, A. m. cosmius, A. entobaptus viridoflavus, A. e. culionensis, A. e. busuangensis, A. quadrasi palawensis*, **subspp. n.**, Philippine Is. *A. inflatus* **nom. n.** for *A. maculiferus inflatus* Fulton, *A. pallidulus* **nom. n.** for *A.* (*Chloris*) *pallidulus* Pilsb., *A. calista* **nom. n.** for *A. chloris calista, purissimus* & *rosa* Pilsb., *A. entobaptus linapacensis, A. e. coronensis* **nomm. mut.** (=*A. e. gracilis* & *A. e. contractus* Mlldff. nomm. nud.), BARTSCH U. S. Nation. Mus. Bull. **100** pp. 1–40.

†*Bulimus darderi* **sp. n.** Cretaceous Mallorca, VIDAL Mem. R. Soc. Esp. Hist. Nat. **10** p. 355.

Bulimulus (*Naesiotus*) *saeronius* p. 9, *trogonius* Galapagos Is. *B.* (*Scutalus* ?) *apurimacensis* Peru, **spp. n.**, DALL Proc. Biol. Soc. Washington **30** pp. 9, 10.—*B. dealbatus*, CRABB **109**.

Partula newcombianum, FULTON **170c**.

Placostylus evolution, SUTER **422**.

ENIDAE, UROCOPTIDAE, PUPILLIDAE & VERTIGINIDAE.

†*Acanthopupa* **gen. n.** of *Vertiginidae* type *A. joossi* **sp. n.** Oligocene Germany, WENZ Jahrb. Nassau. Ver. Naturk. **67** pp. 103, 104.

Anauchen **gen. n.** of *Pupillidae* type *Boysidia gereti* Bav. & Dautz., PILSBRY Man. Conch. **23** p. 188.

Aulacospira, PILSBRY **352**.

Bothriopupa with *B. geminidens* p. 228 Venezuela, *breviconus* p. 230 Guatemala, **spp. n.**, PILSBRY Man. Conch. **23** pp. 226–232.

Boysidia, PILSBRY **352**.

Clausilia (*Albinaria*) *atavirensis* p. 7, *rhodia, koskinensis*, **spp. n.**, Rhodes I., POLLONERA Boll. Mus. Zool. Torino **31** (716) pp. 7, 8.—*C. plicata* Drap. (= *C. portensis* Luso), NOBRE **324**.—*C.* structure, MERKEL **308**, SCHMID **397**.

Fauxulella **sect. n.** of *Fauxulus* type *F. pamphorodon* Bs., PILSBRY Man. Conch. **23** p. 241.

Fauxulus with *F. glanvillianus novenarius* p. 250 Grahamstown, **subsp. n.** *F.* (*Tomigerella*) *layardi* Bs. (= *Pupa soluta* Pfr.), PILSBRY t.c. pp. 234–254.

Gastrocopta with *G. moellendorffiana* p. 145 Philippines, *tatei* p. 165, *hedleyi* p. 166, *mussoni* p. 167 Australia, **spp. n.**, *G. lienardiana eudeli* p. 133 Bourbon, *G. pediculus* Shuttl. (= *Pupa artensis* Montr. *samoensis* Mouss. *nitens* Pse. & *hyalina* Zeleb.) *G. p. queenslandica* p. 159 Queensland, *G. macdonnelli* (= *P. macleayi* Braz.) *G. m. macrodon* p. 165 New Guinea, *G. larapinta deserti* p. 170 Australia **subspp. n.**, *G. lyonsiana kailuana* p. 143 Oahu **form. n.**, *G. procera sterkiana* p. 127 **nom. mut.** (= *duplicata* Sterki non Prest.) *G. neocaledonica* p. 154 **nom. mut.** (= *P. obstructa* Gass. non Braun), PILSBRY t.c. pp. 118–172.

†*Gastrocopta* with *G. undorfensis* **nom. mut.** (= *Pupa miliolum* Cless. non *miliola* Orb.) p 117, PILSBRY t.c. pp. 113–117.

Gyliauchen **gen. n.** of *Pupillidae* type *Hyps. hungerfordiana* Mlldff., PILSBRY t.c. pp. 173, 210.

Holospira (*Haplocion*) *bryantwalkeri* **sp. n.** Mexico, PILSBRY Nautilus **30** p. 124.

Hypselostoma with *H. annamiticum altius* p. 181 **subsp. n.** Annam, PILSBRY Man. Conch. **23** pp. 175–188.

†*Hypselostoma australis* **sp. n.** Quaternary Australia, ODHNER Vet.-Ak Handl. Stockholm **52** (16) p. 98.

Jaminia triplicata & *J. muscorum*, DEAN & TOMLIN **132.**

†*Laminifera mattiaca* **nom. mut.** (= *Cl.* (*L.*) *fischeri* Bttg. non Mich.), WENZ Jahrb. Nassau. Ver. Naturk. **67** p. 84.

Nesopupa farquhari **sp. n.** South Africa, PILSBRY Nautilus **31** p. 50.

Odontocyclas, PILSBRY **352.**

Pagodinella **nom. mut.** (=*Pagodula* Hesse non. Monts.) THIELE Nachr.-Bl. D. malak. Ges. **49** p. 24.

Paraboysidia **subg. n.** of *Boysidia* type *B. paviei* B. & D., PILSBRY Man. Conch. **23** pp. 173, 201.

Pupilla muscorum idahoensis **subsp. n.**, HENDERSON & DANIELS Proc. Acad. Nat. Sci. Phila. **69** p. 57.—*P. blandi pithodes* **subsp. n.** New Mexico, PILSBRY & FERRISS t.c. p. 103.—*P. sterri*, KOLASIUS **261.**

Rachis burnayi zebra, fasciata, **mutt. n.**, West Africa, GERMAIN Ann. Mus. Civ. Genova **7** pp. 233, 234.

Systenostoma, PILSBRY **352.**

Vertigo modesta **subsp. n.** New Mexico, PILSBRY & FERRISS Proc. Acad. Nat. Sci. Phila. **69** p. 104.

†*Vertigo* (*Alaea*) *trolli* **sp. n.** Miocene Silesia, WENZ Jahrb. Nassau. Ver. Naturk. **67** p. 102.

STENOGYRIDAE, COELIAXIDAE & ACHATINIDAE.

Achatinidae, GERMAIN **184.**

Bocageia (*Petriola*) *monticola marginata, maxima* **mut. & var. n.** San-Thomé, GERMAIN Ann. Mus. Civ. Genova **7** pp. 268, 270.

Cochlicopa lubrica, BOWELL Proc. Malac. Soc. **47.**

Cœliaxidae **fam. n.**, GERMAIN Ann. Mus. Civ. Genova **7** p. 299.

Curvella afra **sp. n.** East Africa, BOETTGER Nachr.-Bl. D. malak. Ges. **49** p. 124.

Gomphroa boissyi, MARTEL **292.**

Loboa brunoi **gen. & sp. n.** of *Achatinidae* Trinity I., VON IHERING Nautilus **30** p. 121.

Pseudoglessula with *P. fuscidula thomensis* **var. n.** San-Thomé p. 280, GERMAIN Ann. Mus. Civ. Genova **7** pp. 272–284.—*P. leroyi obesa* **mut. n.** Kilwa, GERMAIN Bull. Mus. Paris **1916** p. 257.

Stenogyrinae, GERMAIN **184.**

Subulina (*Subulona*) *kilwaensis* **sp. n.** Kilwa, GERMAIN Bull. Mus. Paris **1916** p. 258.

SUCCINEIDAE, VERONICELLIDAE & ONCIDIIDAE.

Lucena nomenclature, WOODWARD **477.**

Oncis cinerea **sp. n.** West Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 73.

Succinea elegans hibernation HADDEN **206.**—*S.*, KENNARD & WOODWARD **254.**

Veronicella schivelyoe locomotion, OLMSTED **333.**

ELLOBIIDAE, LIMNAEIDAE & PHYSIDAE.

Acella haldemani, BAKER **12.**

Ancylidæ, BAKER **11**, WALKER **457.**

Ancylus burnupi, CAWSTON **79.**—*A. fluviatilis* synonymy, NOBRE **324.**

Bullinus with *B. tenuistriatus confluens* **var. n.** Echuca, *B. t.* varr. *puncturatus, texturatus, arachnoideus* & *waterhousei*, *B. acutispira* varr. *yarraensis, tenuilirata* & *etheridgii*, *B. aliciæ* var. *kershawi* **nomm. n.** for *Physa puncturata* & *texturata* Sow. *arachnoidea* Ten. Woods *waterhousei* Cless. *yarraensis* Ten. Woods *tenuilirata* & *etheridgii* Smith & *kershawi* Ten. Woods, HEDLEY Rec. Austral. Mus. **12** pp. 3–6.—*B. contortus* as host of disease, BECKER **21.**

†*Carychium moenanum* **sp. n.** Oligocene Germany, WENZ Nachr.-Bl. D. malak. Ges. **49** p. 161.

†*Cassidula de-gasperii* **sp. n.** Tortonian Veneto, STEFANINI Mem. Ist. Geol. Univ. Padova **4** p. 41.

Ferrissia chudeaui **sp. n.** Senegal, GERMAIN Bull. Mus. Paris **1917** p. 526.

Ferrissiinæ **subfam. n.** of *Ancylidæ*, WALKER Nautilus **31** p. 2.

Gundlachia hinkleyi **sp. n.** Guatemala, WALKER Nautilus **31** p. 51.

Heterodiscus Westld. invalid, HESSE **223.**

Isidora as host of disease, CAWSTON **64, 65, 75, 79.**—*Isodora* with *I. hainesii* varr. *pilosa, crebreciliata* & *brazieri*, *I. newcombi* varr. *inflata* & *physopsis* **nomm. n.** for *Physa pilosa* & *crebreciliata* Ten. Woods *brazieri* Smith *inflata* Ad. & Angas and *Limnaea physopsis* Cooke, HEDLEY Rec. Austral. Mus. **12** pp. 6–8.

Isodora vide *Isidora*.

Limnæa (*Radix*) *africana guidimouniensis* **var. n.** N. Africa, GERMAIN Docs. sci. Miss. Tilho **1916** p. 294. *L. auricularia*, BOLAM **41.**—*L. natalensis* as host of disease, CAWSTON **65–68, 72, 75, 76, 79**; *L. attenuata* figd., CONTRERAS **99.**—*L.* as host of disease, FAUST **160**; *L. peregra*, LUNDQUIST **277**; *L. stagnalis*, MURRAY **314**; *L. limosa*, RAJAT **364, 365.**—*L.*, variation, BUCHNER **57**, phylogeny, HEDLEY **213**; *L.*, KENNARD & WOODWARD **254**, SCHLESCH **393**, STEENBERG **415.**

Limnea vide *Limnaea*.

Lymnaea vide *Limnaea*.

Lymnaeidae, BAKER **11.**

Otina otis, STELFOX **419.**

Physa mexicana figd., CONTRERAS **99.**—*P. gyrina* as host of disease, FAUST **160.**—*P. heterostropha* in Lancashire, TAYLOR **423.**

Physidae, BAKER **11.**

Physopsis africana as host of disease, BECKER **21, 22**, CAWSTON **63** to **79.**

Phytia ornata figd., HEDLEY **213.**

Planorbidae, BAKER **11.**

Planorbis (*Paraspira*) *fouladougouensis* **sp. n.** Senegal, GERMAIN Bull. Mus. Paris **1917** p. 523.—*P. corneus praetexta* **var. n.** Russia, HILBERT Nachr.-Bl. D. malak. Ges. **49** pp. 79, 189, REINHARD t.c. p. 138.—*P. trivolvis*, ARCY **9.**—*P. tenue* figd., CONTRERAS **99.**—*P. trivolvum* alimentary canal, LEWIS & JEWELL **276.**—*P. dilatatus* in Lancashire, TAYLOR **423.**—*P.* as host of disease, BECKER **21**, CAWSTON **64, 65, 67, 68, 75–79**, FAUST **160**; *P.*, variation, BUCHNER **57**; *P.*, STEENBERG **415.**

†*Planorbis aucapitainei* Bgt. & *duveyrieri* Desh., GERMAIN **177.**

Rhodacmea **gen. n.** of *Ancylus* type *A. filosus* Conr. with *R.* (*Rhodacmea*) *cahawbenis*, *R.* (*Rhodocephala*) *rhodacme*, *gwatkiniana*, **spp. n.**, Alabama, WALKER Nautilus **31** pp. 1–10.

Rhodacmea **sect. n.** of *Rhodacmea*, WALKER t.c. p. 6.

Rhodacmeinæ **subfam. n.** of *Ancylidæ*, WALKER t.c. p. 5.

Rhodocephala **sect. n.** of *Rhodacmea*, WALKER t.c. p. 8.

INCERTAE SEDIS.

†*Aphanoconia extincta* **sp. n.** Quaternary Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 98.

Caucasicola **nom. mut.** (= *Helle** Hesse 1916 non Osten-Sacken 1896), HESSE Nachr.-Bl. D. malak. Ges. **49** p. 122.

Maltzanella **nom. mut.** (= *Maltzania** Hesse 1916 non Bttg. 1881), HESSE t.c. p. 122.

* See note overleaf.

Maurohelix **nom. mut.** (= *Wiegmannia* * Hesse 1916 non Collinge 1901), Hesse t.c. p. 122.

Pseudofigulina **nom. mut.** (= *Pelasga** Hesse 1916 non *Pelasgis* Ragonot 1890), Hesse t.c. p. 123.

*The paper in which these preoccupied names were published will be included in the Zool. Record for 1918.

Scaphopoda.

†*Dentalium barremicum* **sp. n.** Urgonian France, Cossmann Mem. Soc. Geol. Fr. **21** (51) p. 31.—*D. rutteni, sokkohense,* **spp. n.,** Miocene Java, Martin Samml. Geol. Reichsmus. Leiden **2** p. 262.—*D. solidissimum, cartagenense,* **spp. n.,** Oligocene Colombia, Pilsbry & Brown Proc. Acad. Nat. Sci. Phila. **69** p. 37.—*D. sagittarii* **sp. n.** Oligocene Santo Domingo, Pilsbry & Johnson t.c. p. 185.—*D.*, Trechmann **440.**

Pelecypoda or Lamellibranchia.

Ostracea Tetrabranchia.

†*Alectryonia* (*Ostrea*) *marshii longistriata* **var. n.** Bajocian Peru, Jaworski Neu. Jahrb. Min. Geol. Paläont. Stuttgart Beil. Bd. **40** p. 441.

Anomia aculeata larva, Stafford **409**; *A.*, Monterosato **309.**

†*Anomia gabbi* **sp. n.** Oligocene Santo Domingo, Pilsbry & Johnson Proc. Acad. Nat. Sci. Phila **69** p. 193.

†*Arctostrea avita* **sp. n.** Bathonian Moghara, Douvillé Mem. Acad. Sci. Paris **54** p. 57.

†*Exogyra* cf. *flabellata* Goldf., Newton Trans. R. Soc. Edinburgh **51** p. 564.

Gryphaea, Monterosato **309.**

†*Gryphaea* cf. *dilatata* Sow., Jaworski Neu. Jahrb. Min. Geol. Paläont. Stuttgart Beil. Bd. **40** p. 442.

†*Heligmus integer* p. 33 Bajocian, *laevis* p. 60 **spp. n.** *H. rollandi asiatica* p. 59 **race n.** Bathonian Moghara, Douvillé Mem. Acad. Sci. Paris **54** pp. 33, 59–60.

†*Liogryphea costellata* **sp. n.** Bathonian Moghara, Douvillé t.c. p. 58.

Monia, Monterosato **309.**

Ostrea edulis larva, Dantan **127**; *O.e.,* Houlbert & Galaine **232**; *O. virginiana,* MacBride **279**; *O. virginica* larva, Stafford **409**; *O.*, ecology, Townsend 438, Copeland **105,** propagation, Nelson **318**; *O.*, Monterosato **309.**

†*Ostrea bomasensis, spolongensis,* **spp. n.,** Miocene Java, Martin Samml. Geol. Mus. Leiden **2** p. 263; *O. vaughani insularis* **subsp. n.** Santo Domingo *O. cahobasensis* **sp. n.** Haiti, *O. Sculpturata osculum* **subsp. n.** Colombia, Oligocene Pilsbry & Brown Proc. Acad. Nat. Sci. Phila. **69** p. 40.—*O. bolus* **sp. n.** Oligocene Haiti, Pilsbry & Johnson t.c. p. 193.—*O. celtica,* Bell **24**; O., Fourtau **233,** Tilmann **432.**

Ostreola, Monterosato **309.**

Operculella gen. n. (?) type *O. operculata* **sp. n.** Mediterranean and Atlantic, Monterosato Ann. Mus. Genova (3) **7** p. 15.

Pycnodonta with *P. laticardo, floribunda,* **spp. n.,** *P.f. digitata* **var. n.** Palermo, Monterosato t.c. pp. 12, 13.

Pectinacia.

†*Camptonectes* cf. *annulatus Sow., aalensis* **sp. n.** Jurassic Gloucestershire, Paris & Richardson Q. J. Geol. Soc. London **71** p. 523.

†*Chlamys articulata notgroviensis, sauzeana,* **varr. n.** Jurassic Gloucestershire, Paris & Richardson t.c. pp. 525, 526; *C.*, Fourtau **233,** Stefanini **418.**

†*Eopecten* cf. *urgonensis* Pict. and Camp., Cossmann Mem. Soc. Geol. Fr. **21** (51) p. 43.—*E. articulatus, doultingensis,* **spp. n.,** Jurassic British Is., Paris & Richardson Q. J. Geol. Soc. London **71** p. 531.

†*Flabellipecten,* Stefanini **418.**

Lima dehiscens, Cate **62.**

†*Lima belli* **sp. n.** Oligocene Washington, Dickerson Proc. Calif. Acad. Sci. **7** p. 172.—*L.* (*Plagiostoma*) *middletonensis* **sp. n.** Cretaceous Yorkshire, Sheppard Naturalist **1917** p. 310.—*L.* cf. *itierina* Pict. and Roux, Newton Trans. R. Soc. Edinburgh **51** p. 569; *L. globosa,* Ravn **368.**—*L. perrini* Waring and *haseltinei* Dickerson, Waring **466.**

†*Neithea* with *N. angoliensis* **sp. n.** Cretaceous Angola, NEWTON Trans. R. Soc. Edinburgh **51** pp. 565-568.

†*Palæopecten daubyi*, REED **171.**

Pecten difformis **sp. n.** Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 15.—*P. magellanicus* larva, STAFFORD **409**

†*Pecten smithi* Virginia, *P.* (*Nodopecten*) *vaccamavensis* North Carolina Miocene, **spp. n.**, OLSSON Bull. Amer. Paleont. **5** p. 49; *P. plurinominis* p. 193 *ischnon*, *P.* (*Amusium* ?) *correctus* Oligocene Santo Domingo, *P. uselmæ* Miocene Jamaica, **spp. n.**, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** pp. 193, 194.—*P. peruanus, tingensis*, **spp. n.**, Lias Peru, TILMANN Neu. Jahrb. Min. Stuttgart Beil Bd. **41** pp. 673, 674.—*P.* (*Propeamusium*) *cowperi* **sp. n.** Cretaceous California, WARING Proc. Calif. Acad. Sci. **7** p. 63.—*P.* (*Chlamys*) cf. *erslevi* Harder, BELL Geol. Mag. London **4** p. 416.—*P.* (*Amussium*) "**sp. n,**" *P.* cf. *tigerinus* Müll. Miocene Denmark, NØRREGAARD Medd. Dansk geol. Foren **5** (1) pp. 9, 8.—*P.* cf. *anomalus* Terq. and Jour., PARIS & RICHARDSON Q. J. Geol. Soc. London **71** p. 533.—*P. dubrisiensis, orbicularis*, RAVN **368.**—*P.*, FOURTAU **233**; JAWORSKI **244**; STEFANINI **418**; ØYEN **341.**

†*Pectenidae*, PARIS & RICHARDSON **345.**

†*Plagyostoma* cf. *semicirculare* Goldf., *P.* cf. *rigidum* Sow., DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 76.

†*Vola*, JAWORSKI **244**; TILMANN **432.**

MYTILACEA.

†*Aphanaia*, TRECHMANN **439.**

†*Avicula* cf. *costata* Sow., JAWORSKI Neu. Jahrb. Min. Geol. Paläont. Stuttgart Beil. Bd. **40** p. 435.—*A. pectinata* figd., RAVN **368.**

†*Crenella diuturna, rota*, **spp. n.**, Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 195.

†*Diaphragmella* **gen. n.** of *Aviculidæ* with *D. merismopteroides* **sp. n.** Permo-Carboniferous New South Wales, ETHERIDGE Rec. Austral. Mus. **11** p. 222.

Dreissensia polymorpha, OTTERSTROM **340**, SCHLESCH **392**, ZAUNICK **480.**

†*Gervillia orientalis* **sp. n.** Callovian Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 59.—*G.* cf. *lamellosa* Lep., JAWORSKI Neu. Jahrb. Min. Geol. Paläont. Stuttgart Beil. Bd. **40** p. 416.

†*Glyptodesma* (?) *bundanoonensis* **sp. n.** Permo-Carboniferous New South Wales, ETHERIDGE Rec. Austral. Mus. **11** p. 223.

†*Gosseletia* (?) *tawneyi* **sp. n.** Silurian British Is., REED Proc. Cotteswold Nat. F. C. **19** p. 163.

†*Inoceramus* with *I. pembertoni* p. 61 **sp. n.** Cretaceous California, WARING Proc. Calif. Acad. Sci. **7** pp. 61–62.—*I. orbicularis* figd., RAVN **368.**

†*Lithophaga yorkensis* **sp. n.** Miocene Virginia, OLSSON Bull. Amer. Paleont. **5** p. 51.

†*Modiola chateleti* **sp. n.** Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) p. 40.—*M. progoënsis, barbatiaeformis*, **spp. n.** Miocene Java, MARTIN Samml. Geol. Reichsmus. Leiden **2** p. 264.—*Modiolus pulchellus* Virginia, *gigantoides* North Carolina, **spp. n.**, Miocene, OLSSON Bull. Amer. Paleont. **5** pp. 50, 51.

Mytilus edulis larva, STAFFORD **409**, ecology, WRIGHT **479**; *M.*, MEEK **299.**

†*Mytilus aquitanicus taramellii* **var. n.** Tortonian Veneto, STEFANINI Mem. Ist. Geol. Univ. Padova **4** p. 150.

†*Pinna*, JAWORSKI **244.**

†*Pachymytilus exogyroides* **sp. n.** Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) p. 39.

†*Septifer elegans* **sp. n.** Eocene California, WARING Proc. Calif. Acad. Sci. **7** p. 79.

ARCACEA.

Arca botanica, metella, **spp. n.**, New South Wales, HEDLEY Proc. Linn. Soc. N.S.W. **41** pp. 680, 681; *A.*, LAMY **271.**

†*Arca washingtoniana* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 166.—*A.* (*Scapharca*)

sobrina **nom. mut.** (≐ *consobrina* Sow. non Orb.) *A.* (*S.*) *copiosa* p. 186 *devexa, intumulata* p. 187, *proletaria, coccopleura,* p. 188, *A. cyclica* p. 189, *perfaceta, pomponiana,* p. 190, *cuneolus* p. 191, **spp. n.**, *A. tolepia saxea, scapularis, crassicardinis,* p. 189 **subspp. n.** Oligocene Santo Domingo *A. dolaticosta* p. 188 Oligocene Chiriqui, *idiodon* p. 191 Tertiary N. Carolina, **spp. n.**, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** pp. 186–192.—*A. kelirensis, malaiana,* p. 265, *sundaiana,* **spp. n.**, Miocene Java, MARTIN Samml. Geol. Reichsmus. Leiden **2** pp. 265–266.—*A.* cf. *marylandica* Conr., SHIMER Amer. J. Sci. **41** p. 255.

†*Barbatia gabbi* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 167.

†*Cucullaea with C. youngi* p. 59 **sp. n.** Cretaceous California, WARING Proc. Calif. Acad. Sci. **7** pp. 59, 75, 92.—*C.* cf. *quadrata* Tornq., JAWORSKI Neu. Jahrb. Min. Geol. Paläont. Stuttgart Beil. Bd. **40** p. 444.

†*Idonearca orientalis, deserti,* **spp. n.**, Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** pp. 175, 176.

†*Leda merriami* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 166.—*L. decorata* **sp. n.** Jurassic Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 61.—*L. radiata* **sp. n.** Miocene Java, MARTIN Samml. Geol. Reichsmus. Leiden **2** p. 266.—*L. extricata* **nom. mut.** (= *acuta* Gabb non Conrad) PILSBRY & JOHNSON, Proc. Acad. Nat. Sci. Phila. 69 p. 185.—*L. gracilis,* NØRREGAARD **325.**

†*Malletia elongata* **sp. n.** ? Miocene New Zealand, MARSHALL, Trans. N.Z. Inst. **49** p. 458.

†*Nucula margaritifera* **sp. n.** Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 177.

†*Nuculites* with *N. corrugatus, pholus* p. 32, *ladon, nessus,* p. 33, *lichas, subplanus,* p. 34, *trescotti* p. 35, *robustus* p. 36, *crassus* p. 37, *speciosus* p. 38, *abnormis, chrysippus,* p. 39, *atreus* p. 40, *thyestes* p. 41, *amycus, battus,* p. 43, *galeus, pelops,* p. 44, *eurylochus* p. 45, *lentus* p. 46, **spp. n.**, Silurian Maine, WILLIAMS Proc. U.S. Nation. Mus. **54** pp. 29–53.

Pectunculus setiger **sp. n.** Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 22; *P.*, LAMY **269.**

†*Pectunculus* (?) *bruni* **sp. n.** Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) p. 38.

†*Trigonarca,* NEWTON **320.**

Trigonia uniophora crebrisculpta **var. n.** Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 23.

†*Trigonia hemisphaerica asiatica* **race n.** Bajocian, *T. analoga, depauperata, orientalis,* **spp. n.**, Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** pp. 29, 166, 167, 168.—*T.* with *T. inexspectata* p. 377 R. Atuel, *burckhardti* p. 380 Argentine Liassic, *chunumayensis* p. 384, *praescabroidea* p. 385, Bajocian Peru, **spp. n.**, JAWORSKI Neu. Jahrb. Min. Stuttgart Beil. Bd. **40** pp. 376–387.—*T.* cf. *hanetiana* d'Orb, TRECHMANN Geol. Mag. London (6) **4** p. 298.—*T. smeei,* LANGE, **274.**—*T. crenulata,* NEWTON **320.**

†*Yoldia pisciformis* **sp. n.** Oligocene Colombia, PILSBRY & BROWN Proc. Acad. Nat. Sci. Phila. **69** p. 38.

SUBMYTILACEA.

Anodonta cygnaea and anatina, BLOOMER & OVERTON **36**; *A. imbecilis,* CHURCHILL **89**; *A. cygnea cygnea* and *piscinalis,* HONIGMANN **230.**

†*Anthonya* cf. *baudeti* Coq., NEWTON Trans. R. Soc. Edinburgh **51** p. 572.

Astarte willetti **sp. n.** Alaska, DALL Nautilus **31** p. 11.—*A. quadrans* ecology, BLAKE **34.**

†*Astarte barremica* **sp. n.** Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) p. 36.—*A. perrini* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 168.—*A. excavata asiatica* **race n.** Jurassic Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 50.—*A. robusta pflückeri* **var. n.** Bajocian Peru, JAWORSKI Neu. Jahrb. Min. Geol. Paläont. Stuttgart Beil. Bd. **40** p. 421.—*A.* cf. *solidula* Desh., BELL, Geol. Mag. London **4** p. 417.—*A.* cf. *concentrica* Goldf., NØRREGAARD Medd. Dansk geol. Foren **5** (1) p. 13.—*A.*, BELL **24.**

†*Cardinia densestriata, andium multilamellosa* **sp.** and **var. n.** Liassic Argentine, JAWORSKI Neu. Jahrb. Min. Geol. Paläont. Stuttgart Beil. Bd. **40** pp. 375, 420.

Cardita, LAMY **268.**

†*Cardita brouzetensis* **sp. n.** Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) p. 37.—*C.* (*Carditamera*) *weaveri* sp. n. Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 167.—*C. dupini*, *deserta* **var. n.** Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 162. — *C. superioris* **sp. n.** Eocene California, WARING Proc. Calif. Acad. Sci. **7** p. 91.

†*Cœlopis* cf. *langrunensis* Bigot, DOUVILLÉ Mem. Acad. Sci. Paris **51** p. 51.

Condylocardia digueti **sp. n.** Gulf of California, LAMY Bull. Soc. Hist. Nat. Paris **22** p. 443.

Contradens cambojensis anatomy, ORTMANN **336.**

Crassatella with *C. digueti* **nom. mut.** (= *C. undulata* Sow. non Lam.) *C. sowerbyi* **nom. mut.** (= *C. acuminata* Sow. non Kob.) *C. speciosa* A. Ad. (= *gibbesi* Tuomey and Holmes and *floridana* Dall) *C. nana* A. Ad. and Rve. (= *loebbeckei* Kob.). *C. kingicola* var. *donacina, sulcata, castanea, decipiens, cumingi, C. rostrata* var. *jubar, C. aurora* var. *carnea, C. pacifica* var. *varians* **nomm. n.** for *C. donacina* and *sulcata* Lam. *castanea* and *decipiens* Rve. *cumingi* A. Ad. *jubar* Rve. *carnea* Tate and *varians* Cpr., LAMY J. conchyliol **62** pp. 198–251.

†*Crassatella subregularis* **sp. n.** Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 162.

Crassatellidæ, LAMY **272.**

†*Crassatellites* (*Crassinella*) *microdelta, dolatus*, **spp. n.**, Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 196.—*C. with C. triangulatus* p. 59 **sp. n.** Cretaceous California, WARING Proc. Calif. Acad. Sci. **7** pp. 59, 74–75.

Cuna, LAMY **272.**

Diplodon with *D. felipponei, fortis*, **spp. n.**, Uruguay, MARSHALL Proc. U.S. Nation. Mus. **53** p. 381.

†*Dozyia*, BÖHM **37.**

†*Eriphyla*, BÖHM, **37.**

†*Eriphylopsis*, BÖHM, **37.**

†*Freia* BÖHM, **37.**

Fusconaia barnesiana and *ozarkensis* anatomy, ORTMANN **337.**

Lampsilis ventricosa, CHURCHILL **89.**—*L. texasensis* development, FRIERSON **171.**—*L. ventricosa cohongoronta*, MARSHALL **289**; *L. minor* and *L. villosa*, VAN HYNING **235.**

Margaritana margaritifera, SCHLESCH **395**, STEENBERG **413.**

†*Modiomorpha mytiliformis* **sp. n.** Permo-Carboniferous New South Wales, ETHERIDGE Rec. Austral. Mus. **11** p. 223.

Monocondylaea orbignyana **sp. n.** Argentine, DOELLO JURADO Physis **3** p. 260.

†*Myoconcha* cf. *rathieri* Orb., DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 73.

Nephronaias, FRIERSON **170.**

†*Opis virginalis* **sp. n.** Eocene California, WARING Proc. Calif. Acad. Sci. **7** p. 78.—*O.* cf. *neocomiensis* Orb., DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 163.

†*Pachyopsis* cf. *gaulardea* Buv., JAWORSKI Neu. Jahrb. Min. Geol. Paläont. Stuttgart Beil. Bd. **40** p. 421.

Perrierina, LAMY **272.**

Pseudanodonta rothomagensis, BLOOMER & OVERTON **36.**

Psoronaias kuxensis **sp. n.** Guatemala, FRIERSON Nautilus **31** p. 48.

†*Pteronitella inexpectata* **sp. n.** Silurian Wales, REED Proc. Cotteswold Nat. F.C. **19** p. 161.

Quadrula ebenus, CHURCHILL **89.**

Spatha adansoni major **var. n.** Dahomey, GERMAIN Bull Mus. Paris **1917** p. 517.

Unio with *U. tumidus natermanni* **var. n.** Rumania p. 7, HONIGMANN Abh. u. Ber. Mus. Magdeburg **2** (4) pp. 4–9.—*U. tetralasmus* development, FRIERSON **170a.**—*U. consentaneus*, GEYER, **186, 187.**—*U. wolwichi*, HAAS **204.**—*U. complanatus*, REDFIELD **369.**—*U.*, L. **264**, STEENBERG **415.**

†*Unio flabellatus protti* **var. n.** Miocene Veneto, STEFANINI Atti Acc. Sci. Padova **8** p. 154.—*U. f. prottii*, *U.* cf. *lorioli* Maill and Loc., STEFANINI Mem. Ist. Geol. Univ. Padova **4** pp. 144, 146.

Unionidae synonymy, HAAS **203**, **204**; *U.*, BAKER **11**, UTTERBACK **443**, WALKER **456**.

Venericardia, LAMY **268**.

†*Venericardia* (*Pleuromeris*) *scituloides* **sp. n.** Miocene Florida, OLSSON Bull. Amer. Paleont. **5** p. 58.—*V. aversa*, *santodomingensis*, **spp. n.**, Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** pp. 196, 197.—*V.* with *V. planicosta venturensis* p. 80 **subsp.n.** Eocene California WARING Proc. Calif. Acad. Sci. **7** pp. 80, 95.

ERYCINACEA.

†*Bornia virginiana* **sp. n.** Miocene Virginia, OLSSON Bull. Amer. Paleont **5** p. 55.

†*Erycina regifica* **sp. n.** Miocene South Carolina, OLSSON t.c. p. 55.

†*Rochefortia* (*Pythinella*) *filicaticola* **sp. n.** Miocene Virginia, OLSSON t.c. p. 56.

Solecardia cryptozoica **sp. n.** Sydney, HEDLEY Proc. Linn. Soc. N.S.W. **41** p. 684.

CARDIACEA.

Adacna plicata, ANDRUSOV **4**.

Cardium with *C.* (*Cerastoderma*) *isosceles* p. 59, *rectidens* p. 60, **spp. n.**, *C. r. adusta*, *fragilis* and *pulchella* Monts. Mss. p. 61, *alba*, *obliquata* and *supina* Monts. Mss. p. 62, *minor* p. 61, *drepanensis*, *varnensis* p. 62, **varr. n.** Mediterranean, COEN Atti. Acc. ven.-trent. **8** pp. 54–62.—*C.*, HEDLEY **209**.

†*Cardium woolnoughi* **sp. n.** Pliocene England, BELL Geol. Mag. London **4** p. 418.—*C. spolongense* p. 266, *sokkohense*, *djunggranganense*, p. 267, *automolos*, *kelirense*, p. 268, *bomasense*, *jogjacartense*, p. 269, **spp. n.**, Miocene Java, MARTIN Samml. Geol. Reichsmus. Leiden **2** pp. 266–269.

†*Granocardium simplex*, *quinquecostatum*, **spp. n.**, Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** pp. 159, 160.

†*Protocardia peregrinorsa orientalis* **race n.** *P. hillana prisca* **mut. n.** Cretaceous Moghara, DOUVILLÉ t.c. p. 158.—*P. hocki* **sp. n.** Lias Peru TILMANN Neu. Jahrb. Min. Stuttgart Beil. Bd. **41** p. 680.

†*Trachycardium* cf. *syriacum* Conr., NEWTON Trans. R. Soc. Edinburgh **51** p. 573.

CHAMACEA.

Chama fibula, HEDLEY **209**; *C.* anatomy, ODHNER **328**.

†*Chama pacifica* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 172.

†*Echinochama trachyderma* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 197.

†*Hippurites gaudryi* and *H. giordani*, PARONA **347**.

†*Toucasia*, NEWTON **320**.

CONCHACEA.

Callanaitis **gen. n.** of *Veneridae* type *Venus yatei* Gray (= *Salacia* Jukes-Br. preocc.), IREDALE Proc. Malac. Soc. **12** p. 329.

Calyculina truncata reproduction, GILMORE **190**.

Chione laticostata **sp. n.** Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 26.

†*Chione dalli* **sp. n.** Miocene Virginia, OLSSON Bull. Amer. Paleont. **5** p. 57.—*C. santodomingensis*, *socia*, *primigenia*, **spp. n.**, Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 199.—*C.* cf. *amideii* Mngh., STEFANINI Mem. Ist. Geol. Univ. Padova **4** p. 123.

Circe plana **sp. n.** Australia, ODHNER Vet.-Ak. Handl. Stockholm **52** (16) p. 27.

†*Circe junghuhni* **sp. n.** Miocene Java, MARTIN Samml. Geol. Reichsmus. Leiden **2** p. 271.

Clessinia Piaget invalid, HESSE **223.**

†*Coralliophaga* (?) *barremica* **sp. n.** Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) p. 31.

Corbicula tchadiensis **nom. n.** for *C. tsadiana* Mts. GERMAIN Docs. sci. Miss. Tilho **1916** p. 318.

†*Cyclinella cyclica domingensis* **subsp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 200.

†*Cyprina* (*Venilicardia*) *lagamensis* **sp. n.** Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 155.

†*Cyrena taramelli, tellinii,* **spp. n.,** Oligocene Peonis, STEFANINI Atti Acc. Sci. Padova **8** pp. 75, 76.—*C. robertidouvillei* **sp. n.** Miocene Friuli, STEFANINI *t.c.* p. 156 and Mem. Ist. Geol. Univ. Padova **4** p. 131.

†*Diplodonta dalli* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 171.—*D. dedecoris* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 198.

Dosinia grata, GATLIFF & GABRIEL **173.**

†*Dosinia azuana* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 200.—*D. milthoidea* **sp. n.** Cretaceous California, WARING Proc. Calif. Acad. Sci. **7** p. 60.

†*Ensis schmidti* **sp. n.** Miocene Virginia, OLSSON Bull. Amer. Paleont. **5** p. 53.—*E.* cf. *ensis* Schum., GRIPP Neu. Jahrb. Min. Stuttgart Beil.-Bd. **41** (1) p. 32.

Gouldia californica **sp. n.** California, DALL Proc. U.S. Nation. Mus. **51** p. 579.

Hemidonax, LAMY **272.**

†*Isocardia* with *I. chicoensis* p. 62 **sp. n.** Cretaceous California, WARING Proc. Calif. Acad. Sci. **7** pp. 62, 93.

†*Macrocallista cordata* p. 62 Cretaceous, *stantoni* p. 77 Eocene California, WARING t.c. pp. 62, 77.

†*Meretrix* (*Flaventia*) *orientalis, deserti,* **spp. n.,** Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** pp. 150, 151.—*M.* (*Lioconcha*) *arntzenii, progoënsis,* p. 270, *M.* (*Pitar*) *jogjacartensis, jonkeri,* **spp. n.,** Miocene Java, MARTIN Samml. Geol. Reichsmus. Leiden **2** pp. 270, 271.—*M. incrassata* Sow. forma *nana* Oligocene Peonis, STEFANINI Atti. Acc. Sci. Padova **8** p. 74.—*M.* (*Caryatis*) *incrassata praelongata* **var. n.** Oligocene Germany, WENZ Nachr.-Bl. D. malak. Ges. **49** p. 159.

Musculium rosaceum fuligiosum, L. **265.**

†*Orthonota rigida,* REED **171.**

†*Petricola* (*Claudiconcha*) *grinnelli* **sp. n.** Miocene Virginia, OLSSON Bull. Amer. Paleont. **5** p. 54.

Pisidium latchfordi, L. **265**; *P. lilljeborgi,* OLDHAM **330**; *P.,* OLIVER **332**; STEENBERG **415.**

†*Pitar* (*Hysteroconcha*) *casta* **sp. n.** Oligocene Colombia, PILSBRY & BROWN Proc. Acad. Nat. Sci. Phila. **69** p. 38. *Pitaria clarki* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 169.

†*Psammobia martini* **sp. n.** Oligocene Washington, DICKERSON t.c. p. 168.

Salacia vide *Callanaitis.*

†*Sinodia tertiaria* **sp. n.** Miocene North Sea, NEWTON Q.J. Geol. Soc. **72** p. 18.

†*Solen* (*Ensis*) cf. *rollei* (Hornes), BELL Geol. Mag. London **4** p. 419.

Sphaeridae, BAKER 11.

Sphaerium simile reproduction, GILMORE, **190.**—*S. torsum,* L. **265.**

Venus mercenaria larva, STAFFORD **409**; *V.m.,* COX **108.**

MYACEA.

†*Corbula cowlitzensis* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 168.—*C. dilatata* **sp. n.** Eocene California, WARING t.c. p. 92.—*C. acutangula* figd., FOURTAU **233.**

†*Glycimeris andersoni* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 166.—*G. concava* **sp. n.** Tertiary New Zealand, MARSHALL Trans. N.Z. Inst. **49** p. 459.—*G. tumefactus* p. 38, *trilobicosta, lloydsmithi,* p. 39, **spp. n.,** Oligocene Colombia, PILSBRY & BROWN Proc. Acad. Nat. Sci. Phila. **69** pp. 38–40.—*G. santodomin-*

gensis, diffidentiae, **spp. n.**, Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 192.—*G.* with *G. maccrayi* p. 93 **sp. n.** Eocene California, WARING Proc. Calif. Acad. Sci. **7** pp. 61, 75, 93.—*G. heberti incrassata* **var. n.** Oligocene Germany, WENZ Nachr.-Bl. D. malak. Ges. **49** p. 157.

†*Labiosa* (*Raeta*)*gabbi* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 202.

Lutraria, LAMY **267**.

†*Lutraria ovalis* **sp. n.** (= *L. sanna* auctt. non Bast.) Pliocene England, BELL Geol. Mag. London **4** p. 420.

Mactra with *M. luzonica apicina*, *M.* (*Mactrotoma*) *fragilis ambigua* and *M.* (*M.*) *aspersa elongata* **nomm. n.** for *M. apicina* Desh., *ambigua* Weink. and *elongata* Q. and G. (= *notata* Hutt.) LAMY J. conchyliol. **63** pp. 176–275; *M.*, LAMY **267**.

†*Mactra gabbiana* figd., WARING **466**.

Mactridae, LAMY **273**.

Mya arenaria, REDFIELD **369**, nervous system, GÖTHLIN **193**, larva, STAFFORD **409**.

†*Panopea worthingtoni*, MARSHALL **284**.—*P.* cf. *plicata* Sow., NEWTON Trans R. Soc. Edinburgh **51** p. 574.

†*Saxicava arnoldi* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 171.

†*Solenocurtus* (*Mactra*) *pectiniferus* **sp. n.** Miocene Java, MARTIN Samml. Geol. Reichsmus. Leiden **2** p. 273.

†*Spisula packardi* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad. Sci. **7** p. 169.—*S.* (*Hemimactra*) *harrisi* **sp. n.** Miocene South Carolina, OLSSON Bull. Amer. Paleont. **5** p. 52.—*S. aequilateralis* **sp. n.** Eocene California, WARING Proc. Calif. Acad. Sci. **7** p. 80.

DIBRANCHIA.

LUCINACEA.

†*Corbis* with *C. chateleti* **sp. n.** p. 34 Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) pp. 32–34.

†*Divaricella proletaria* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 198.

†*Lucina* (*Dentelucina*) *djunggranganensis, kemedjingensis*, **spp. n.**, Miocene Java, MARTIN Samml. Geol. Reichsmus. Leiden **2** p. 274—*L. mauryae* **sp. n.** Oligocene Santo Domingo PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 198.—*L.* cf. *schloenbachi* v. Koen, NØRREGAARD Medd. Dansk. Geol. Foren **5** (1) p. 13.—*L.* cf. *squamosa* Terqu., JAWORSKI Neu. Jahrb. Min. Geol. Paläont. Stuttgart Beil. Bd. **40** p. 446.

Lucinida hilaira **sp. n.** Montagu I., HEDLEY Proc. Linn. Soc. N.S.W. **41** p. 683.

†*Miltha parsonsi* **sp. n.** Eocene California, WARING Proc. Calif, Acad. Sci. **7** p. 78.

†*Paracyclas* (?) *obliqua* **sp. n.** Permo-Carboniferous New South Wales, ETHERIDGE Rec. Austral. Mus. **11** p. 225.

†*Phacoides bruni* **sp. n.** Urgonian France, COSSMANN Mem. Soc. Geol. Fr. **21** (51) p. 34.—*P.* (*Pseudomiltha*) *wongi* **sp. n.** Miocene Florida, OLSSON Bull. Amer. Paleont **5** p. 57.—*P. perplexus*, *P.* (*Parvilucina*) *pupulus*, **spp. n.**, Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** pp. 197, 198.—*P.* cf. *orbicularis* (Desh.) STEFANINI Mem. Ist. Geol. Univ. Padova **4** p. 140.—*P.*, MARSHALL **284**.

TELLINACEA.

Amphidesma solidum anatomy, SCHRÖDER **399**.

Cumingia embryology, HEILBRONN **216**, MORRIS **310**.

†*Metis efferta, postrema*, **spp. n.**, Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** pp. 201, 202.

†*Semele reagani* **sp. n.** Oligocene Washington, DICKERSON Proc. Calif. Acad, Sci. **7** p. 170.—*S. nelliana* **sp. n.** Miocene South Carolina, OLSSON Bull. Amer. Paleont **5** p. 53.—*S. delimata, firma*, **spp. n.**, Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 200.

Tellina astula **sp. n.** New South Wales, HEDLEY Proc. Linn. Soc. N.S.W. **41** p. 691.—*T. elaborata* **sp. n.** N.W. Australia, SOWERBY Proc. Malac. Soc. **12** p. 321.—*T. gibber* and *T. iheringi*, DOELLO JURADO **143**.

†*Tellina sokkohensis* p. 274 *retifera, permodesta,* **spp. n.**, Miocene Java, MARTIN Samml. Geol. Reichsmus. Leiden **2** pp. 274, 275.—*T.* (*Merisca*) *errati* **sp. n.** Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 201.—*T.* cf. *donacia* L., NØRREGAARD Medd. Dansk. geol. Foren, **5** (1) p. 16.—*T. lacunosa* figd., FOURTAU **233**.

ANATINACEA

†*Allorisma* with [*A.*] *passaloides* **sp. n.** Permo-Carboniferous New South Wales, ETHERIDGE Rec. Austral. Mus. **11** pp. 225, 226.

†*Arcomya deserti* **sp. n.** Bajocian Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 31.

†*Cercomya deserti* **sp. n.** Cretaceous Moghara, DOUVILLÉ t.c. p. 174.

†*Ceromya* (*Ceromyopsis*) *rostrata* **sp. n.** Bajocian Moghara DOUVILLÉ t.c. p. 32.

Chamostrea plicifera **sp. n.** Australia, ODHNER Vet. Ak. Handl. Stockholm **52** (16) p. 34.

Chamostreidae, ODHNER t.c. p. 34.

†*Cuspidaria ornatior, gabbi,* **spp. n.**, Oligocene Santo Domingo, PILSBRY & JOHNSON Proc. Acad. Nat. Sci. Phila. **69** p. 195.

†*Pholadella mccoyi* **sp. n.** Silurian British Is., REED Proc. Cotteswold Nat. F. C. **19** p. 164.

†*Pholadomya orientalis* **sp. n.** Bajocian Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 30.—*P.* cf. *plagemanni* Mör., JAWORSKI Neu. Jahrb. Min. Geol. Paläont. Stuttgart Beil. Bd. **40** p. 448.—*P.* cf. *vignesi* Lartet, NEWTON Trans. R. Soc. Edinburgh **51** p. 574.—*P. subelongata* Meek (= *breweri* Gabb and *royana* Whiteaves), WARING **466**. —*P.* cf. *alpina* Math., OPPENHEIM **335**.

†*Spheniopsis scalaris,* NØRREGAARD **325**.

INCERTAE SEDIS.

Cyamiomactra, LAMY **272**.

Ephippodonta granulifera Australia **sp. n.**, ODHNER Vet. Ak. Handl. Stockholm **52** (16) p. 25.

†*Eurymyella* cf. *shaleri*, Williams, REED **171**.

†*Pachydomella* ? *piesta* **sp. n.** Cretaceous New South Wales, ETHERIDGE Rec. Austral. Mus. **11** p. 219.

Cephalopoda.

GENERAL.

Cephalopoda distribution NAEF **317**; glands, BOTTAZZI **44**; *C.*, BARTSCH **13**; BERRY **27**.

CEPHALOPODA.

†*Acanthodiscus* (*Neocomites* ?) *alpinojurensis, paludensis, A.* (*Kilianella*) *subhystricoides,* **spp. n.**, Hauterivian Basses Alpes, KILIAN & REBOUL Mém. carte géol. Fr. Paris **1915** pp. 240, 241, 242.

†*Acanthoplites*, KILIAN & REBOUL t.c. pp. 43–47.

†*Actinocamax plenus*, RAVN **368**.

Amphitretus pelagicus, SASAKI **385**.

†*Ancyloceras*, KILIAN & REBOUL **255**.

†*Aptychus*, DE BRUN **56**.

Argonauta böttgeri radula, MASSY **296**.

†*Arietites* with *A.* (*Vermiceras*) *stübeli* p. 659, *A.* (*Arnioceras*) *angusticostatus* p. 663, *A.* (*Asteroceras*) *bravoi* p. 665, **spp. n.**, Lias Peru, TILMANN Neu. Jahrb. Min. Stuttgart Beil. Bd. **41** pp. 656–668.

†*Arnicoceras* cf. *geometricum* Orb. Liassic Peru, JAWORSKI Neu. Jahrb. Min. Stuttgart Beil. Bd. **40** p. 426.

†*Atractites*, TILMANN **432**.

†*Aturia aturi* figd., FOURTAU **233**.

†*Baculites chicoensis* figd., WARING **466**.

†*Balatonites* with *B. quaternonodatus* p. 291, *zimmeri* p. 292, *zimmermanni* p. 294, **spp. n.**, *B. ottonis rectangularis* p. 289 **var. n.** Triassic Germany, RASSMUSS Jahrb. k. Preuss. Geol. Landesanst **34** pp. 287–302.

†*Belemnites*, KILIAN & REBOUL **255**.

Brachioteuthis, BERRY **27**.

†*Cœloceras coronatoides* **sp. n.** Bajocian Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 24.

†*Costidiscus*, KILIAN & REBOUL **255**.

†*Crioceras* with *C.* cf. *munieri* Sar. & Schön. cf. *obliquatum*, *dilatatum*, and *simplex* Orb., DOUVILLÉ Mem. Acad. Sci. Paris **54** pp. 111–115.—*C. bowerbankii*, CRICK **111**, WILMER **474**.

†*Cycloceras* cf. *actaeon* Orb., JAWORSKI Neu. Jahrb. Min. Geol. Paläont. Stuttgart Beil. Bd. **40** p. 427.

†*Deroceras* cf. *armatum* Sow., JAWORSKI t.c. p. 451.

†*Douvilleiceras meyendorffi pachypleura* **var. n.** Cretaceous Moghara DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 117.—*D.*, KILIAN & REBOUL **255**.

†*Duvalia* cf. *grasi* Duval, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 90.

Eledone moschata teratology, VAYSSIÈRE **446**.

†*Ermoceras* **gen. n.** of *Schlotheimiinae* p. 17 with *E. mogharense* type p. 19, *deserti* p. 17, *elegans* p. 18, *inerme* p. 20 **spp. n.**, Bajocian Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** pp. 17–21.

†*Gymnites spiniger* **sp. n.** Triassic Bosnia, DIENER Centralbl. Min. Geol. Paläont. Stuttgart **1917** p. 110.

†*Hamites* cf. *compressus* Sow., *H.* cf. *elegans* Sow., DOUVILLÉ Mem. Acad. Sci. Paris **54** pp. 96, 97.

†*Haplopleuroceras* with *H. rhodanense* **sp. n.** Jurassic Rhonetal, VON BÜLOW Z. D. Geol. Ges. **69** pp. 85–90.

†*Harpoceras* cf. *eseri* Opp. JAWORSKI Neu. Jahrb. Min. Stuttgart Beil. Bd. **40** p. 429.

†*Hauericeras transitionale* **sp. n.** Cretaceous California, WARING Proc. Calif. Acad. Sci. **7** p. 69.

†*Hoplites* with *H.* (*Kilianella*) cf. *ambiguus* Uhlig, REVIL Mem. Acad. Sci. Savoie **2** pp. 291–293.

†*Knemiceras priscum*, *gracile*, **spp. n.**, Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** pp. 122, 128.

†*Kossmatella costata* **sp. n.** Cretaceous Moghara, DOUVILLÉ t.c. p. 96.

†*Kossmaticeras zelandicum*, *tenuicostatum*, **spp. n.**, Miocene New Zealand, MARSHALL Trans. N.Z. Inst. **49** pp. 444, 445.

†*Leopoldia dubisiensis* var. *bargemensis* **nom. n.** for *L. bargemensis* Kil., KILIAN & REBOUL Mém. carte géol Fr. Paris **1915** p. 244.

†*Lytoceras vicinum* **sp. n.** Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 93.—*L.*, KILIAN & REBOUL **255**, MARSHALL **284**.

†*Macroscaphites*, KILIAN & REBOUL **255**.

†*Microdoceras birchii*, TILMANN **432**.

Monoceros crassilabrum, GIGOUX **189**.

†*Monoceros crassilabrum*, GIGOUX **189**.

Moroteuthis (*Moroteuthopsis*) *ingens*, MASSY, **296**.

Moschites with *M. albida* p. 15, *adelieana* p. 17, *aurorae* p. 20, *harrissoni* p. 24, **spp. n.**, Antarctic, BERRY Austral. Ant. Exp. 1911–1914 **4** (2) pp. 13–27.—*M. verrucosa* and *challengeri*, BERRY **31**.—*M. charcoti*, *turqueti*, *brevis*, anatomy, MASSY, **296**.

Nautilus, BARTSCH **13**, RASSMUSS **366**.

†*Nautilus desertorum* **sp. n.** *N.* cf. *hexagonus* Sow. Oxfordian Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 71.—*N.* cf. *lineatus* Sow., JAWORSKI Neu. Jahrb. Min. Stuttgart Beil. Bd. **40** p. 450.—*N. hallidayi* figd., WARING **466**.—*N.* with *N. begudensis* p. 227 **sp. n.** Hauterivian Basses Alpes, KILIAN & REBOUL Mém. carte géol. Fr. Paris **1915** pp. 16–18, 227.

†*Neocomites* with *N. nodosoplicatus*, *neocomiensiformis inaequicostata* p. 235, **sp.** and **var. n.** Hauterivian Basses Alpes, KILIAN & REBOUL t.c. pp. 228–237.

Octopus vulgaris, LAMEERE **266**; *O.*, GOLDSMITH **195**.

Ocythoe, BERRY **26**.

Oegopsida, MASSY **296**.

Onychoteuthis banksi, MASSY **296**.

†*Orthoceras* figd., FAURA Y SANS **159**.

†*Oxynoticeras orientale* **sp. n.** Jurassic Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 40.

†*Parahoplites*, KILIAN & REBOUL **255.**

†*Perisphinctes* cf. *birmensdorfensis* Moesch., DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 69.

†*Phylloceras* cf. *rouyanum* Orb., DOUVILLÉ t.c. p. 101.—*P.* cf. *glaberrimum* Neum., TILMANN **432.**—*P.*, KILIAN & REBOUL **255.**

†*Placenticeras* with *P. sanctaemonicae* **sp. n.** Cretaceous California, WARING Proc. Calif. Acad. Sci. **7** p. 70.

Polymorphites, TRUEMAN **441.**

Polypus ovulum, parvus, longispadiceus, conispadiceus **spp. n.**, Japan, SASAKI Annot. Zool. Jap. **9** pp. 364, 365, 366, 367.—*P. rugosus, occidentalis, australis, brucei*, anatomy, MASSY **296.**

†*Pseudorthoceras knoxense*, GIRTY **191.**

†*Psiloceras* with *P. reissi* p. 654 **sp. n.** Lias Peru, TILMANN Neu. Jahrb. Min. Stuttgart Beil. Bd. **41** pp. 648–656.

†*Puzosia* with *P. issarpayensis* p. 248 **sp. n.** Hauterivian Basses Alpes, KILIAN & REBOUL Mém. carte géol. Fr. Paris **1915** pp. 25–28, 248.

Pyrgopsis pacificus radula, MASSY **296.**

Pyroteuthis (*Pterygioteuthis*) *giardi*, MASSY **296.**

Rhyncoteuthion, MASSY **296.**

Rondoletia **gen. n.** of *Sepiolinae* type *Sepietta minor*, NAEF Publ. Staz. Zool. Napoli **1** p. 2.

†*Saynella termieri* **sp. n.** Aptian France, KILIAN & REBOUL Mém. carte géol. Fr. Paris **1915** p. 29.

†*Schloenbachia varians, coupei*, RAVN **368.**

†*Schlotheimia*, TILMANN **432.**

Semirossia tenera anatomy, MASSY **296.**

Sepia officinalis, CRAIFALEANU **110**, CUÉNOT **118**, LAMEERE **266.**

Sepietta with *S. obscura* p. 4, *neglecta* p. 9, **spp. n.**, Gulf of Naples, NAEF Publ. Staz. Zool. Napoli **1** pp. 3–10.

†*Silesites nepos* **sp. n.** Cretaceous Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 109.

†*Sonninia* with *S. peruana* p. 401 **sp. n.** Bajocian Peru, JAWORSKI Neu. Jahrb. Min. Geol. Paläont. Stuttgart Beil. Bd. **40** pp. 395–405.

†*Sphaeroceras*, JAWORSKI **244.**

†*Spitidiscus cauvini* **sp. n.** Hauterivian Basses Alpes, KILIAN & REBOUL Mém. carte géol. Fr. Paris **1915** p. 249.

Stauroteuthis (?) *mawsoni* **sp. n.** Antarctic, BERRY Austral. Ant. Exp. 1911–1914 **4** (2) p. 8.

†*Stephanoceras* aff. *baylei* Opp. JAWORSKI Neu. Jahrb. Min. Stuttgart Beil. Bd. **40** p. 431.

Stigmatoteuthis chuni, MASSY **296.**

†*Stringoceras pustuliferum* **sp. n.** Jurassic Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 41.

†*Taramelliceras compsum zürcheri* **var. n.** Hauterivian Basses Alpes, KILIAN & REBOUL Mém. carte géol. Fr. Paris **1915** p. 250.

†*Tetragonites* cf. *duvali* Orb., DOUVILLÉ Mem. Acad. Sci. Paris **54** p. 95.

Teuthowenia antarctica radula, MASSY **296.**

†*Thamboceras* **gen. n.** of *Amaltheidae* type *T. mirum* **sp. n.** Bajocian Moghara, DOUVILLÉ Mem. Acad. Sci. Paris **54** pp. 21, 22.

†*Thurmannites*, KILIAN & REBOUL **255.**

Tremoctopus violaceus anatomy, MASSY **296.**

†*Tropidoceras* cf. *masseanum* Orb., JAWORSKI Neu. Jahrb. Min. Stuttgart Beil. Bd. **40** p. 428.

†*Turrilites*, REVIL **372.**

IX. ARTHROPODA

(GENERAL)

ARRANGED BY

D. SHARP.

CONTENTS

	PAGE
I. TITLES	1
II. SUBJECT INDEX..	1

N.B.—For Protura *vide* XII. Insecta. Aptera.

I.—TITLES.

Cooley, R. A. Killing small arthropods with the legs extended. The Journal of Parasitology Urbana Ill. **1** 1914 (105). **1**

Hilton, W. A. The action of simple reagents on the ganglia of Arthropods. J. Ent. Zool. Claremont, Cal. **7** 1915 (130–133). **2**

Holmgren, N. Zur vergleichenden Anatomie des Gehirns von Polychaeten, Onychophoren, Xiphosuren, Arachniden, Crustaceen, Myriopoden und Insekten. Vorstudien zu einer Phylogenie der Arthropoden. Stockholm Vet.-Ak. Handl. **56** No. 1 1916 (303) 12 pls. 54 textfigs. **3**

II.—SUBJECT INDEX.

GENERAL. 2403

Cooley, killing, 1.

STRUCTURE. 2407

Hilton, 2; Holmgren, 3.

PHYLOGENY. 2423

Holmgren, 3.

X. CRUSTACEA

ARRANGED BY

W. T. CALMAN, D.Sc.

CONTENTS

	PAGE
I. Titles	3
II. Subject-Index :—	
General, Economics	9
Structure	10
Physiology	10
Development	10
Ethology	10
Variation and Aetiology	11
Distribution :—	
1. Geographical :—	
A. General (vacant)	
B. Land and Fresh-water	11
C. Marine	12
2. Geological	13
III. Systematic Index :—	
Decapoda	14
Brachyura	14
Oxyrhyncha	14
Cyclometopa	14
Catometopa	14
Oxystomata	14
Dromiacea	14

PAGE

Anomura 15
Galatheidea 15
Paguridea 15
Hippidea (vacant)
Macrura 15
Nephropsidea 15
Eryonidea 15
Loricata 15
Thalassinidea 15
Caridea 15
Penaeidea 17
Stenopidea (vacant)
Euphausiacea... 17
Mysidacea 17
Syncarida 17
Stomatopoda 17
Cumacea 17
Tanaidacea (vacant)
Isopoda 17
Asellota... 17
Phreatoicidea (vacant)
Flabellifera 17
Valvifera 18
Epicaridea 18
Oniscoidea 18
Amphipoda 19
Gammaridea 19
Hyperiidea 19
Caprellidea 19
Phyllocarida 19
Branchiopoda 19
Phyllopoda 19
Cladocera 19
Copepoda 20
Branchiura 21
Ostracoda 21
Cirripedia 21

I.—TITLES.

Allee, W. C. The salt content of natural waters in relation to rheotaxis in *Asellus*. Biol. Bull. Woods Hole **32** 1917 (93–97). **1**

Allen, E. J. and **Sexton, E. W.** The loss of the Eye-pigment in *Gammarus chevreuxi*. A Mendelian study. Plymouth J. Mar. Biol. Ass. **11** 1917 (273–353) pls. i–vii. **2**

Almeroth, H. Ueber einige weitere für die Litoralregion des Genfer Sees neue Cladoceren. Zool. Anz. Leipzig **49** 1917 (245–251). **3**

Arévalo, C. Cladóceros de la Albufera de Valencia. Zaragoza Bol. soc. Arag. **16** 1917 (133–143 164–176) figs. **4**

Banta, A. M. One hundred parthenogenetic generations of *Daphnia* without sexual forms. [Abstract.] New York Proc. Soc. Exp. Biol. Med. **11** 1914 (180–182) 1 table. **5**

Baumann, H. Das Cor frontale bei decapoden Krebsen. Zool. Anz. Leipzig **49** 1917 (137–144) figs. **6**

Bigelow, H. B. Explorations of the coast water between Cape Cod and Halifax in 1914 and 1915, by the U.S. Fisheries schooner "Grampus." Oceanography and Plankton. Cambridge Mass. Bull. Mus. Comp. Zool. Harvard **61** No. 8 1917 (163–357) 2 pls. **7**

Björck, W. Zoologische Ergebnisse der schwedischen Expedition nach Spitzbergen 1908 unter Leitung von Prof. G. De Geer. Teil 2 : 6. Die Schizopoden des Eisfjords. Stockholm Vet.-Ak. Handl. **54** No. 6 1916 (10 pp.) 1 textfig. **8**

Borner, L. Faunistische Notizen vom Statzersee im Oberengadin. Chur Jahresb. Natf. Ges. Graub. **57** 1917 (55–64) figs. **9**

Borradaile, L. A. The Percy Sladen Trust Expedition to the Indian Ocean in 1905 under the leadership of Mr. J. Stanley Gardiner. Vol. vi, No. viii. On the Pontoniinae. London Trans. Linn. Soc. ser. 2 Zool. **17** 1917 (323–396) pls. lii–lvii. **10**

Borradaile, L. A. The Percy Sladen Trust Expedition to the Indian Ocean in 1905 under the leadership of Mr. J. Stanley Gardiner. Vol. vi, No. ix. On Carides from the Western Indian Ocean. London Trans. Linn. Soc. ser. 2 Zool. **17** 1917 (397–412) pls. lviii–lix. **11**

Borradaile, L. A. Barnacles from the hull of the "Terra Nova": a note. Ann. Mag. Nat. Hist. London ser. 8 **19** 1917 (229–230). **12**

Borradaile, L. A. On the functions of the mouth-parts of the common Prawn. Cambridge Proc. Phil. Soc. **19** 1917 (p. 56). **13**

Borradaile, L. A. On the structure and function of the Mouth-parts of the Palaemonid Prawns. London Proc. Zool. Soc. **1917** 1917 (37–71) figs. **14**

Bouvier, E. L. Sur la classification des Eupotamonea, crabes d'eau douce de la famille des Potamonidés. Paris C. R. Acad. Sci. **165** 1917 (615–621). **15**

Bouvier, E. L. Sur la classification des Parapotamonea, crabes d'eau douce de la famille des Potamonidés. Paris C. R. Acad. Sci. **165** 1917 (657–659). **16**

Bouvier, E. L. Sur la distribution des crabes d'eau douce de la famille des Potamonidés. Paris C. R. Acad. Sci. **165** 1917 (751–755). **17**

Bouvier, E. L. Crustacés décapodés (Macroures marcheurs) provenant des campagnes des yachts *Hirondelle* et *Princesse-Alice* (1885–1915). Rés. camp. sci. Monaco **50** 1917 (104 pp.) 11 pls. **18**

Brian, A. Descrizione di una nuova specie di *Laophonte* (*L. quaterspinata* n. sp. mihi) proveniente dei materiali del Laboratorio marino di Quarto. Monitore zool. ital. Firenze **28** 1917 (174–178) figs. **19**

Brian, A. Note sur trois Copépodes parasites provenant des collections du Musée Océanographique de Monaco. Bull. Inst. Océan. Monaco No. **324** 1917 (8 pp.) figs. **20**

Broch, H. Results of Dr. E. Mjöberg's Swedish scientific expeditions to Australia, 1910–13. 8. Cirripedien. Stockholm Vet.-Ak. Handl. **52** No. 8 1916 (16 pp.) 2 pls. 2 text-figs. **21**

Calman, W. T. Notes on the morphology of *Bathynella* and some allied Crustacea. Q. J. Microsc. Sci. London **62** 1917 (489–514) text-figs. **22**

Calman, W. T. Crustacea. Part iv. Stomatopoda, Cumacea, Phyllocarida, and Cladocera. Brit. Antarct. ("Terra Nova") Exp., 1910. Nat. Hist. Rep. Zool. **3** No. 5 1917 (137–162) text-figs. **23**

Calman, W. J. [T.]. Cumacés. Deuxième Exped. Antarct. Française (1908–1910). Documents scientifiques **1917** (1 p.). **24**

Chappuis, P. A. Zur Kenntnis der Copepodenfauna von Surinam. I. Cyclopiden. Zool. Anz. Leipzig **49** 1917 (221–223) figs. **25**

Checchia-Rispoli, G. *Distefania,* nuovo genere di Brachiuri del Cenomaniano della Sicilia. Roma Boll. Soc. Zool. Ital. ser. 3 **3** fasc. 12 1917 (173–186) 1 pl. text-figs. **26**

Chilton, C. The New Zealand Sandhoppers belonging to the genus *Talorchestia.* Trans. and Proc. N. Zeal. Inst. **49** (1916) 1917 (292–303) figs. **27**

Chilton, C. Notes on Australian Isopoda. Adelaide Trans. R. Soc. S. Australia **41** 1917 (391–404) figs. **28**

Chilton, C. Results of the South Australian Museum Expedition to Strzelecki and Cooper Creeks. September and October, 1916. (*l*) Crustacea. Adelaide Trans. R. Soc. S. Australia **41** 1917 (475–482) figs. **29**

Chilton, C. Further notes on the New Zealand Amphipod *Hyale grenfelli,* Chilton. Ann. Mag. Nat. Hist. London ser. 8 **19** 1917 (273–276) figs. **30**

Chilton, C. A new tuberculate terrestrial Isopod from New Zealand. Ann. Mag. Nat. Hist. London ser. 8 **19** 1917 (327–329) pl. xiii. **31**

Chilton, C. Notes on the distribution of the Amphipods, *Elasmopus rapax,* A. Costa, and *Maera inaequipes* (A. Costa). J. Zool. Research London **2** 1917 (17–19). **32**

Chilton, C. The identity of the two Amphipods, *Ampelisca eschrichtii,* Kröyer, and *A. macrocephala,* Liljeborg, considered from an antarctic point of view. J. Zool. Research London **2** 1917 (75–93) figs. **33**

Collinge, W. E. A revision of the British Idoteidae, a family of marine Isopoda. Edinburgh Trans. R. Soc. **51** 1917 (721–760). pls. i–xi. **34**

Collinge, W. E. Description of a new species of terrestrial Isopod from the Guacharo Cave, Trinidad. J. Zool. Research London **2** 1917 (29–30) figs. **35**

Collinge, W. E. Description of a new British terrestrial Isopod (*Trichoniscoides scabrous,* n. sp.). J. Zool. Research London **2** 1917 (95–96). **36**

Collinge, W. E. Description of a new species of Isopoda of the genus *Paridotea,* Stebbing. J. Zool. Research London **2** 1917 (111 – 114) pl. vi. **37**

Collinge, W. E. Descriptions of some further new varieties of British Woodlice. J. Zool. Research London **2** 1917 (123–125). **38**

Collinge, W. E. On the re-occurrence of *Ligidium hypnorum* (Cuv.) in Great Britain. J. Zool. Research London **2** 1917 (p. 151). **39**

Collinge, W. E. A check-list of the British Terrestrial Isopoda (Woodlice). Scot. Nat. Edinburgh **1917** 1917 (111–116). **40**

Collinge, W. E. Some remarks upon the occurrence of two rare Woodlice in Scotland. Scot. Nat. Edinburgh **1917** 1917 (137–139). **41**

Collinge, W. E. *Porcellio ratzeburgii,* a woodlouse new to the Scottish fauna. Scot. Nat. Edinburgh **1917** 1917 (251–252). **42**

Collinge, W. E. Descriptions of three new varieties of British Woodlice. Lancs. Nat. Darwen **9** 1917 (p. 266). **43**

Collinge, W. E. On the occurrence of a rare British Woodlouse in Lancashire. Lancs. Nat. Darwen **9** 1917 (p. 307). **44**

Collinge, W. E. On the habitat of the Woodlouse *Platyarthrus hoffmannseggii* Brandt. Lancs. Nat. Darwen **10** 1917 (172–173). **45**

Collinge, W. E. Description of a new species of Isopoda of the genus *Synidotea*, Harger, from the Gulf of Mannar. Rec. Ind. Mus. Calcutta **13** 1917 (1–3) pl. i. **46**

Collinge, W. E. Contributions to a knowledge of the Terrestrial Isopoda of Natal. Part I. Ann. Natal Mus. London **3** 1917 (567–585) pls. xl–xlii. **47**

Colosi, G. Un caso di parallelismo morfologico negli Eufausiacei. Monitore Zool. Ital. Firenze **28** 1917 (41–48). **48**

Colosi, G. Sui rapporti faunistici fra il Mediterraneo e l'Atlantico. Monitore Zool. Ital. Firenze **28** 1917 (107–116). **49**

Colosi, G. Eufausiacei raccolti nel Mediterraneo dalla R.N. *Washington*. Firenze Bull. Soc. Entom. **48** 1917 (118–130) figs. **50**

Colosi, G. Crostacei, Parte ii, Eufausiacei. Raccolte planctoniche fatte dalla R. Nave "Liguria" nel viaggio di circonnavigazione del 1903-05 sotto il comando di S.A.R. Luigi di Savoia, Duca degli Abruzzi. Vol. **2** fasc. vii 1917 (165–205) pls. xiv-xvi. Firenze Pubblic. Ist. St. Sup. **51**

Cooper, W. O. *Vide* Omer-Cooper, W.

Coutière, [H.]. Crustacés Schizopodes et Décapodes. Deuxième Exped. Antarct. Française (1908–1910). Documents scientifiques **1917** (8 pp.) text-figs. **52**

Delachaux, T. Cladocères de la région du Lac Victoria Nyanza. (Voy. du Dr. J. Carl dans la région des lacs de l'Afrique Centrale). Rev. Suisse Zool. Genève **25** 1917 (77–93) text-figs. **53**

Delsman, H. C. Die Embryonalentwicklung von *Balanus balanoides* Linn. Helder Tydschr, Ned. Dierk. Ver. (2) **15** 1917 (419–520) pls. xv-xxix text-figs. **54**

Dewar, G. A. B. *vide* Omer-Cooper, W.

Dodds, G. S. Altitudinal distribution of Entomostraca in Colorado. Washington D.C. Smithsonian Inst. Proc. U.S. Nation. Mus. **54** 1917 (59–87) pls. xiii-xiv. **55**

Douwe, C. van. Zur Kenntnis der Süsswasser-Harpacticiden Deutschlands. Zool. Anz. Leipzig **48** 1917 (277–280). **56**

Duncan, F. Martin. A note on fertilization and deposition of ova in *Portunus depurator*. London J. R. Microsc. Soc. **1917** 1917 (375–376). **57**

Evans, William. *Trichoniscoides sarsi*, a woodlouse new to the Scottish Fauna, on the Isle of May. Scot. Nat. Edinburgh **1917** 1917 (35–36). **58**

Farwick, B. Zur Verbreitung des *Cyclops bisetosus* Rehberg und der *Moina rectirostris* Leydig. Zool. Anz. Leipzig **48** 1917 (219–221). **59**

Farwick, B. Eine weitere Fundstelle von *Cyclops bisetosus* Sars. Zool. Anz. Leipzig **48** 1917 (p. 304). **60**

Fasten, N. Cilia in the Arthropoda. Science New York N.S. **46** 1917 (440–442). **61**

Fasten, N. Male reproductive organs of *Decapoda*, with special reference to Puget Sound forms. Puget Sound Marine Stat. Pub. **1** 1917 (285–307) pls. lxviii–lxxii. **62**

Fehlmann, J. W. Die Bedeutung des Sauerstoffes für die aquatile Fauna. Zürich Vierteljahrsschr. Natf. Ges. **62** 1917 (230–241). **63**

Fraser, C. M. Possible lobster planting areas on the East coast of Vancouver Island, B.C. Contrib. Canadian Biol. 1914–15 Ann. Rep. Dept. Naval Service Fisheries Br. Ottawa **5** Suppl. 1916 (119–132) map. **64**

Granata, L. Crostacei. Parte i, Ostracodi. Raccolte planctoniche fatti dalla R. Nave "Liguria" nel viaggio di circonnavigazione del 1903–05 sotto il comando di S. A. R. Luigi di Savoia, Duca degli Abruzzi. Vol. **2** fasc. vi 1915 (121–162) 6 pls. Firenze Pubblic. Ist. St. Sup. **65**

Grant, C. The Spiny Lobster. New York Zool. Soc. Bull. **20** 1917 (1461–1463) fig. **66**

Gurney, Robert. The Perch lake at Westwick. Norwich Trans. Nat. Soc. **10** 1915 (23–33) pls. i-ii. **67**

Hay, W. P. A new genus and three new species of parasitic Isopod Crustaceans. Washington D.C. Smithsonian Inst. Proc. U.S. Nation. Mus. **51** 1917 (569–574) pls. xcviii-c. **68**

Hay, W. P. Preliminary descriptions of five new species of Crustaceans from the coast of North Carolina. Washington D.C. Proc. Biol. Soc. **30** 1917 (71–74). **69**

Herriott, *Miss* E. M. Notes on the occurrence and habits of the freshwater Crustacean *Lepidurus viridis* Baird. Trans. and Proc. N. Zeal. Inst. **49** (1916) 1917 (284–291). **70**

Hesse, E. *vide* Léger, L.

Hilton, W. A. The central nervous system of the Amphipod *Orchestia.* J. Ent. Zool. Claremont Calif. **9** 1917 (88–90) pl. **71**

Hilton, W. A. The central nervous system of the parasitic Isopod, *Grapsicephon.* J. Parasitol. Urbana Ill. **4** 1917 (25–26) 1 pl. **72**

Hofsten, N. von. Zoologische Ergebnisse der schwedischen Expedition nach Spitzbergen 1908 unter Leitung von Prof. G. De Geer. Teil 2:7 Die Decapoden Crustaceen des Eisfjords. Stockholm Vet. Ak. Handl **54** No. 7 1916 (108 pp.) 2 pls. 13 text figs. **73**

Holmgren, N. Zur vergleichenden Anatomie des Gehirns von Polychaeten, Onychophoren, Xiphosuren, Arachniden, Crustaceen, Myriopoden und Insekten. Vorstudien zu einer Phylogenie der Arthropoden. Stockholm Vet. -Ak. Handl. **56** No. 1 1916 (303 pp.) 12 pls. 54 text figs. **74**

Huntsman, A. G. A new Caprellid from the Bay of Fundy. Contrib. Canad. Biol. 1911–1914. Fasc. i. Rep. Dept. Marine and Fisheries Ottawa **47** Suppl. 1915 (39–42) pls. v & vi. **75**

Huntsman, A. G. The fresh-water Malacostraca of Ontario. Contrib. Canad. Biol. 1911–1914. Fasc. ii. Rep. Dept. Marine and Fisheries Ottawa **47** Suppl. 1915 (145–163) figs. **76**

Huntsman, A. G. Concerning some Ontario Crayfishes. Ottawa Nat. **30** 1917 (130–132). **77**

Kemp, S. Notes on Crustacea Decapoda in the Indian Museum. viii. The genus *Acetes,* Milne-Edwards. Rec. Ind. Mus. Calcutta **13** 1917 (43–58) figs. **77a**

Kemp, S. Notes on Crustacea Decapoda in the Indian Museum. ix. *Leander styliferus,* Milne Edwards, and related forms. Rec. Ind. Mus. Calcutta **13** 1917 (203–231) pls. viii–x. **78**

Kemp, S. Notes on the fauna of the Matlah River in the Gangetic Delta. Rec. Ind. Mus. Calcutta **13** 1917 (233–241) figs. **79**

Kemp, S. Notes on Crustacea Decapoda in the Indian Museum. X. Hymenosomatidae. Rec. Ind. Mus. Calcutta **13** 1917 (243–279) figs. **80**

Kemp, S. Notes on Crustacea Decapoda in the Indian Museum. XI. Atyidae of the genus *Paratya* (=*Xiphocaridina*). Rec. Ind. Mus. Calcutta **13** 1917 (293–306) figs. **81**

Knight, A. P. Lobster sanctuaries and hatching ponds: an investigation of the Long Beach lobster pond, Digby County, Nova Scotia, in 1914. Contrib. Canadian Biol. 1914–15. Ann. Rep. Dept. Naval Service Fisheries Br. Ottawa **5** Suppl. 1916 (41–54) pls. ii–vii figs. **82**

Léger, L. et **Hesse,** E. Sur les Microsporidies de la crevette d'eau douce. Paris C. R. soc. biol. **80** 1917 (12–15) figs. **83**

Longley, W. H. Changeable coloration in Brachyura. Washington D.C. Proc. Nat. Acad. Sci. **3** 1917 (609–612). **84**

Lundblad, O. Om ett fynd av *Limnadia lenticularis* (L.) i Sverige, jämte några iakttagelser över artens biologi. [On a find of *L. l.* in Sweden, with some observations on its biology.] Zool. Beiträge aus Uppsala **4** 1916 (249–268) 5 textfigs. **85**

MacClement, W. T. Diatoms and Lobster rearing. Contrib. Canadian Biol. 1915–1916. Ann. Rep. Dept. Naval Service Fisheries Br. Ottawa **6** Suppl. 1917 (11–20) figs. **86**

McClendon, J. F. On adaptations in structure and habits of some marine animals of Tortugas, Florida. Washington D.C. Carnegie Inst. Pap. Tortugas Lab. **3** 1911 (57–62) 2 pls. **87**

McCulloch, A. R. Studies in Australian Crustacea. No. 4. Sydney N.S.W. Rec. Austr. Mus. **11** 1917 (231–238) pls. xlii–xliii. **88**

McMurrich, J. P. The winter plankton in the neighbourhood of St. Andrews, 1914–15. Contrib. Canadian Biol. 1915–16. Ann. Rep. Dept. Naval Service Fisheries Br. Ottawa **6** Suppl. 1917 (1–8) table. **89**

McMurrich, J. P. Notes on some Crustacean forms occurring in the plankton of Passamaquoddy Bay. Ottawa Trans. R. Soc. Can. ser. iii **11** Sect. iv 1917 (47–61) figs. **90**

Man, J. G. de. Diagnoses of new species of Macrurous Decapod Crustacea from the Siboga-Expedition. Zool. Meded. Leiden **3** 1917 (279–284). **91**

Matsui, H. Studies in the chemical composition of "Tarabogani" (*Paralithodes camtschatica*). Tokyo J. Coll. Agric. **5** 1916 (395–400). **92**

Matsui, H. *vide* Okuda, Y.

Mortensen, Th. Papers from Dr. Th. Mortensen's Pacific Expedition, 1914–16. I. Observations on protective adaptations and habits, mainly in marine animals. Kjøbenhavn Nath. Medd. **69** 1917 (57–96) pl. i text-figs. **93**

Nakazawa, K. Ise-ebi no hentai kenkyu. [On the metamorphosis of *Panulirus japonicus*.] Dobuts Z. Tokyo **29** 1917 (259–267) pl. **94**

Nierstrasz, H. F. Die Isopoden-Sammlung im naturhistorischen Reichsmuseum zu Leiden. II. Cymothoidae, Sphaeromidae, Serolidae, Anthuridae, Idotheidae, Asellidae, Janiridae, Munnopsidae. Zool. Meded. Leiden **3** 1917 (87–120) pls. xiii–xiv. **95**

Nowlin, Nadine and **Smith, Inez.** The intracellular development of a gregarine, *Frenzelina ampelisca* n. sp. J. Parasitol. Urbana Ill. **4** 1917 (83–88) 1 pl. **96**

Okuda, Y. and **Matsui, H.** On the Canned Crab. Tokyo J. Coll. Agric. **5** 1916 (325–337). **97**

Oldwig, H. Zoologische Ergebnisse der Schwedischen Expedition nach Spitzbergen 1908 unter Leitung von Prof. G. De Geer. T. 2:8. Die Amphipoden, Isopoden und Cumaceen des Eisfjords. Stockholm Vet.-Ak. Handl. **54** No. 8 1917 (56 pp.) map. **98**

Olofsson, O. Süsswasser-Entomostraken und Rotatorien von der Murmanküste und aus dem nördlichsten Norwegen. Zool. Beiträge aus Uppsala **5** 1917 (259–294) textfigs. pl. **99**

Omer-Cooper, W. The Fishing Village and other writings. Introduction by G. A. B. Dewar. Bournemouth **1917** (184 pp.) portr and 4 pls. **100**

Parisi, B. I Decapodi giapponesi del Museo di Milano. V. Galatheidea e Reptantia. Pavia Atti. Soc. ital. sci. nat. **56** 1917 (1–24) figs. **101**

Pearse, A. S. Isopoda collected by the Bryant Walker expedition to British Guiana, with notes on Crustacea from other localities. Occ. Papers Mus. Zool. Univ. Michigan Ann. Arbor **46** 1917 (1–8) figs. **102**

Popple, E. Additions to the Crustacea of Hertfordshire. Hertford Trans. Nat. Hist. Soc. **16** 1917 (167–168). **103**

Porter, C. E. Materiales para la fauna carcinológica de Chile. xii. Sobre los *Galatheidae* del Museo Nacional. Rev. chilena Santiago **20** 1916 (111–117). **104**

Porter, C. E. Materiales para la fauna carcinológica de Chile. xiii. Sobre un Copépodo nuevo para Chile. Rev. chilena Santiago **21** 1917 (p. 89) **105**

Rathbun, Mary J. New species of South Dakota Cretaceous Crabs. Washington D.C. Smithsonian Inst. Proc. U.S. Nation. Mus. **52** 1917 (385–391) pls. xxxii-xxxiii. **106**

Rathbun, Mary J. Description of a new species of crab from the California Pliocene. Washington D.C. Smithsonian Inst. Proc. U.S. Nation. Mus. **53** 1917 (451–452) pl. lix. **107**

Romyn, G. Over *Macrothricidae* in Nederland. Helder Tydschr. Ned. Dierk. Ver. **16** (2) 1917 (vii-xv). **108**

Rosendorn, Ilse. Neue *Oithona*-Formen. Zool. Anz. Leipzig **48** 1917 (301–303). **109**

Roux, J. Crustacés (Expédition de 1903). Nova Guinea. Résultats de l'expédition scientifique néerlandaise à la Nouvelle Guinea. **5** 1917 (589–621) pls. xxvii & xxviii. **110**

Sars, G. O. Entomostraca of Georgian Bay. Contrib. Canad. Biol. 1911–1914 Fasc. ii. Rep. Dept. Marine and Fisheries Ottawa **47** Suppl. 1915 (221–222). **111**

Sars, G. O. An account of the Crustacea of Norway with short descriptions and figures of all the species. Vol. **6** Copepoda Cyclopoida pts. 11 & 12 Clausidiidae, Lichomolgidae (part). 1917 (141–172) pls. lxxxi-xcvi. **112**

Sars, G. O. *Urocopia singularis* G. O. Sars, a peculiar semiparasitic Copepod from great deeps of the Northern Atlantic Ocean. Bergens Mus. Aarb. **1916-17** heft 1 1917 no. 4 (11 pp.) 1 pl. **113**

Schmaus, H. Die *Rhincalanus*-Arten, ihre Systematik, Entwicklung und Verbreitung. (Vierte Mitteilung über die Copepoden der Valdivia-Expedition). Zool. Anz. Leipzig **48** 1917 (305–319 356–368) figs. **114**

Schwartz, K. Y. Results of Dr. E. Mjöbergs Swedish Scientific Expeditions to Australia 1910–1913. 15. Descriptions of two Australian Phyllopoda. Stockholm Vet. Ak. Handl. **52** No. 15 1917 (1–8) text figs. **115**

Sexton, E. W. *vide* Allen, E. J.

Skogsberg, T. Results of Dr. E. Mjöbergs Swedish Scientific Expeditions to Australia 1910–1913. 16. A new fresh-water Ostracod. Stockholm Vet. Ak. Handl. **52** No. 15 1917 (9–22) textfigs. **116**

Smith, Inez *vide* Nowlin, Nadine.

Sollaud, E. Les appendices post-céphaliques des Branchiopodes et leur signification morphologique. Paris C.R. Acad. Sci. **164** 1917 (791–794) figs. **117**

Standen, R. Report on terrestrial Isopoda (Woodlice) for 1916–17. Lancs. Nat. Darwen **10** 1917 (43–53). **118**

Stebbing, T. R. R. South African Talitridae. Ann. Mag. Nat. Hist. London ser. 8 **19** 1917 (330–331); **20** 1917 (p. 435). **119**

Stebbing, T. R. R. The Malacostraca of Durban Bay. Durban Ann. Mus. **1** 1917 (435–450) pls. xxii-xxiii. **120**

Stebbing, T. R. R. The Malacostraca of Natal. Durban Ann. Mus. **2** 1917 (1–33) pls. i-vi. **121**

Stebbing, T. R. R. South African Crustacea (Part IX of S.A. Crustacea, for the Marine Investigations in South Africa). Cape Town Ann. S. Afric. Mus. **17** 1917 (23–46) pls. i-viii. **122**

Stephensen, K. On a collection of *Gammarus* from Randers Fjord, Denmark. Kjøbenhavn Nath. Medd. **68** 1917 (37–50) figs. **123**

Stock, V. On some of the parasitic Copepods of the Bay of Fundy fish. Contrib. Canad. Biol. 1911–1914 Fasc. i. Rep. Dept. Marine and Fisheries Ottawa **47** Suppl. 1915 (69–71). **124**

Tait, J. Experiments and observations on Crustacea. Part i. Immersion experiments on *Ligia*. Edinburgh Proc. R. Soc. **37** 1917 (50–58). **125**

Tait, J. Experiments and observations on Crustacea: Part ii. Moulting of Isopods. Edinburgh Proc. R. Soc. **37** 1917 (59–68). **126**

Tait, J. Experiments and observations on Crustacea: Part iii. Limb flexures and limb-taxis in the Peracarida. Edinburgh Proc. R. Soc. **37** 1917 (69–94) text-figs. **127**

Tait, J. Experiments and observations on Crustacea: Part iv. Some structural features pertaining to *Glyptonotus*. Edinburgh Proc. R. Soc. **37** 1917 (246–303) figs. **128**

Tait, J. Experiments and observations on Crustacea: Part v. A functional interpretation of certain structural features in the pleon of Macrurous Decapods. Edinburgh Proc. R. Soc. **37** 1917 (304–305). **129**

Tait, J. Body colour as affected by blood colour in Amphipods and Isopods, with some remarks on a bacterial infection of *Gammarus*. Edinburgh Proc. R. Physic. Soc. **20** 1917 (159–163). **130**

Terao, A. Notes on the photophores of *Sergestes prehensilis* Bate. Annot. Zool. Jap. Tokyo **9** Pt. iii 1917 (299–316) figs. **131**

Tesch, J. J. Synopsis of the genera *Sesarma*, *Metasesarma*, *Sarmatium* and *Clistocoeloma*, with a key to the determination of the Indo-Pacific species. Zool. Meded. Leiden **3** 1917 (127–260) pls. xv–xvii. **132**

Thompson, W. R. Sur un Diptère parasite des Isopodes terrestres (*Phyto melanocephala* Meig.). Paris C. R. soc. biol. **80** 1917 (785–788) figs. **133**

Verhoeff, K. W. Zur Kenntnis der Gattung *Mesoniscus.* Ueber Isopoden, 17. Aufsatz. Zool. Jahrb. Jena Syst. **37** 1914 (493–508) pl. xxviii. **134**

Verhoeff, K. W. Germania zoogeographica; die Verbreitung der Isopoda terrestria im Vergleich mit derjenigen der Diplopoden. (Zugleich über Isopoden, 18. Aufsatz.) Zool. Anz. Leipzig **48** 1917 (347–355 369–389). **135**

Verhoeff, K. W. Zur Kenntnis der Gattungen *Trichoniscus* und *Mesoniscus.* (Ueber Isopoden, 19. Aufsatz.) Zool. Anz. Leipzig **49** 1917 (40–57) figs. **136**

Walcott, C. D. Cambrian geology and paleontology iv. No. 3. Fauna of the Mount Whyte formation. Washington D.C. Smithsonian Inst. Misc. Collect. **67** No. 3 1917 (61–114) pls. 8–13. **137**

Watson, Minnie E. Three new gregarines from marine Crustacea. J. Parasitol. Urbana Ill. **2** 1916 (129–136) pl. **138**

Watson, Minnie E. A new infusorian parasite in sand fleas. J. Parasitol. Urbana Ill. **2** 1916 (145–146) figs. **139**

Way, Evelyn. Brachyura and crab-like Anomura of Friday Harbor, Washington. Puget Sound Marine Stat. Pub. **1** 1917 (349–382) pls. 78–82. **140**

Wilson, C. B. Parasitic Copepods from Nanaimo, British Columbia, including eight species new to science. Contrib. Canadian Biol. 1906–1910 Ottawa 1912 (85–101) pls. iii-ix. **141**

Wilson, C. B. North American parasitic Copepods belonging to the Lernaeidae with a revision of the entire family. Washington D.C. Smithsonian Inst. Proc. Nation. Mus. **53** 1917 (1–150) pls. i-xxi. **142**

Wilson, C. B. The economic relations, anatomy, and life history of the genus *Lernaea.* Washington D.C. Dept. Comm. Lab. Bull. Bur. Fish. **35** for 1915–16, 1917 (165–198) pls. vi-xv. **143**

Yatsu, N. Note on the structure of the maxillary gland of *Cypridina hilgendorfii.* J. Morph. Philadelphia **29** 1917 (435–449) text-figs. **144**

Yoshida, S. On the intermediate hosts of the lung distome, *P. westermani* Kerbert. J. Parasitol. Urbana Ill. **2** 1916 (111–118) 1 pl. **145**

Yoshida, S. On a Trematode larva encysted in a crab, *Helice tridens* (de Haan). J. Parasitol. Urbana Ill. **3** 1916 (76–81) figs. **146**

II.—SUBJECT INDEX.

N.B.—The numbers in Clarendon type refer to list of Titles, except when they indicate a Volume.

GENERAL. 2603

Bibliography.

W. Omer-Cooper, papers on *Isopoda* reprinted; **Dewar** and others, **100.**

Expeditions.

"Liguria," *Euphausiacea*; **Colosi, 51**: *Ostracoda*; **Granata, 65.**

"Sealark," *Caridea*; **Borradaile, 10, 11.**

"Siboga," *Caridea*; **de Man, 91.**

"Terra Nova," *Stomatopoda, Cumacea, Phyllocarida, Cladocera*; **Calman, 23.**

"Valdivia," *Oithona* (*Copep.*); **Rosendorn, 109**: *Copepoda*; **Schmaus, 114.**

"Washington," *Euphausiacea*; **Colosi, 50.**

Economics.

Fishery, *Panulirus argus* (*Loric.*); Key West; **Grant, 66**: *Paralithodes camtschatica,* Japan; **Matsui, 92.**

Lobster hatching and rearing; **Knight, 82**: **MacClement, 86**: Lobster planting, Brit. Columbia; **Fraser, 64.**

Canned *Paralithodes,* chemical invest. of flesh; **Okuda** & **Matsui, 97.**

Trout food; **Gurney, 67.**

Brachyura as intermediate hosts of lung distome; **Yoshida, 145.**

Relations of *Lernaea* (*Copep.*) to mussel culture; **Wilson, 143.**

STRUCTURE. 2607

General.

Macrura *Reptantia*; **Bouvier, 18**: *Pontoniinae* (*Carid.*); **Borradaile, 10**: *Bathynella* and other *Syncarida*; **Calman, 22**: *Idoteidae* (*Valv.*); **Collinge, 34**: *Glyptonotus* (*Valv.*); **Tait, 128**: *Mesoniscus* (*Onisc.*); **Verhoeff, 134**: *Lernaeidae* (*Copep.*); **Wilson, 142, 143.**

Exoskeleton.

Articulation of pleon somites, *Nephropsidea*; **Tait, 129.**

Appendages.

Appendages, *Crustacea*, esp. mouth-parts *Malacostraca*; **Borradaile, 14**: Post-cephalic limbs, *Branchiopoda*; **Sollaud, 117**: Limb-flexures and limb-taxis in *Peracarida*; **Tait, 127.**

Nervous System.

Brain; **Holmgren, 74**: Centr. Nerv. Syst. *Orchestia* (*Gamm.*); **Hilton, 71**: *Epicaridea*; **Hilton, 72.**

Sense Organs.

Eyes; **Holmgren, 74.**

Circulatory System.

Cor frontale, *Decapoda*; **Baumann, 6.**

Excretory System.

Maxillary gland, *Cypridina* (*Ostrac.*); **Yatsu, 144.**

Reproductive System.

Male reproductive organs, *Decapoda*; **Fasten, 62.**

Thelycum, *Euphausiacea*; **Colosi, 51.**

Miscellaneous.

Photophores, *Sergestes* (*Penaeid.*); **Terao, 131.**

Cilia in *Decapoda*; **Fasten, 61, 62.**

Moulting, *Isopoda*; **Tait, 126.**

PHYSIOLOGY. 2611

Respiration, freshwater *Crustacea*; **Fehlmann, 63.**

Immersion experiments on *Ligia* (*Onisc.*); **Tait, 125.**

Rheotaxis and salts, *Asellus*; **Allee, 1.**

Constant internal volume of pleon, *Nephropsidea*; **Tait, 129.**

Movements of limbs, &c., *Glyptonotus* (*Valv.*); **Tait, 128.**

Functions of mouth-parts, *Caridea*; **Borradaile, 13, 14.**

Moulting, *Isopoda*; **Tait, 126.**

Colour-change, *Brachyura*; **Longley, 84.**

Blood-colour and body-colour, *Amphipoda*, *Isopoda*; **Tait, 130.**

Luminosity, *Sergestes* (*Penaeid.*); **Terao, 131.**

Parthenogenesis, *Daphnia*; **Banta, 5.**

Inheritance of lack of eye-colour, *Gammarus*; **Allen & Sexton, 2.**

DEVELOPMENT. 2615

General.

Lernaeidae (*Copep.*); **Wilson, 142.**

Fertilisation and deposition of eggs, *Portunus* (*Cyclom.*); **Duncan, 57.**

Embryology.

Cell-lineage and embryonic development, *Balanus* (*Cirrip.*); **Delsman, 54.**

Metamorphosis, Larval Forms, &c.

Larvae, *Panulirus* (*Loricata*); **Nakazawa, 94**: *Rhincalanus* (*Copep.*); **Schmaus, 114**: *Lernaea* (*Copep.*); **Wilson, 143**: *Apoda* (?) and *Ascothoracida* (*Cirrip.*); **McMurrich, 90.**

Post-larval stages *Eryonidea*, *Loricata*; **Bouvier, 18.**

ETHOLOGY. 2619

Habits, &c., *Sesarminae* (*Catom.*); **Tesch, 132**: *Synalpheus* and *Typton* (*Carid.*); **McClendon, 87**: *Pontoniinae* (*Carid.*): **Borradaile, 10**: *Limnadia* (*Phyllop.*); **Lundblad, 85**: *Lepidurus* (*Phyllop.*); **Herriott, 70.**

Habitats.

Habitat, &c., *Paralithodes camtschatica*; **Matsui, 92.**

Estuarine *Caridea*; **Kemp, 78**: Estuarine *Caridea* resembling deep-sea species; **Kemp, 79.**

Altitudinal distrib. *Branchiopoda, Copepoda*; **Dodds, 55.**

Glacial relict spp.; **Gurney, 67.**

Oxygen needs of freshwater Crustacea; **Fehlmann, 63.**

Plankton, Marine; **Bigelow, 7**: **Calman, 23**: **Granata, 65**: **McMurrich, 89**: **McMurrich, 90**: **Schmaus, 114.**

Parasitism, Commensalism, etc.

On Whales, *Lernaeidae* (*Copep.*); **Wilson, 142.**

On fish, *Copepoda*; **Brian, 20**; **Stebbing, 122**: **Stock, 124**; **Wilson, 141**, *Lernaeidae* (*Copep.*); **Wilson, 142, 143.**

On *Tunicata, Copepoda*; **Sars, 112.**

On *Crustacea*: Dipterous larva in *Oniscoidea*; **Thompson, 133**: *Epicaridea*; **Hay 68**: *Trematoda*; **Yoshida, 145, 146**: *Infusoria*; **Watson, 139**: *Gregarinida*; **Watson, 138**: Gregarine in *Ampelisca* (*Gamm.*); **Nowlin & Smith, 96**: *Microsporidia* in *Gammarus*; **Léger et Hesse, 83**: Bacterial infection, *Gammarus*; **Tait, 130.**

On Mollusca, *Copepoda*; **Sars, 112.**

On Echinodermata, *Copepoda*; **Sars, 112.**

In Sponges, *Caridea*; **McClendon, 87.**

Commensal *Pontoniinae* (*Carid.*); **Borradaile, 10.**

Platyarthrus (*Onisc.*) occ. apart from ants; **Collinge, 45.**

Defence and Protection, Colour, etc.

Protective resemblance, *Crustacea*; **Mortensen, 93.**

Body colour and blood colour, *Amphipoda, Isopoda*; **Tait, 130.**

VARIATION AND AETIOLOGY. 2623

Variation.

Blue Lobster; **C. H. Townsend,** New York Zool. Soc. Bull. **20** 1917 p. 1547.

Var. of *Gammarus* spp.; **Stephensen, 123.**

Phylogeny.

Macrura Reptantia; **Bouvier, 18**: *Pontoniinae* (*Carid.*); **Borradaile, 10**: *Leander, Palaemon* (*Carid.*); **Kemp, 78**: *Syncarida*; **Calman, 22.**

Morphological parallelism in *Euphausiacea*; **Colosi, 48.**

DISTRIBUTION. 2627

1. GEOGRAPHICAL.

A. GENERAL.

[Vacant.]

B. LAND AND FRESHWATER (INCLUDING SALT LAKES).

General.

Sesarminae (*Catom.*); **Tesch, 132**: *Potamonidae* (*Cyclom.*); **Bouvier, 15-17.**

Europe and Mediterranean Islands. *d*

Europe, *Oniscoidea*; **Verhoeff, 136.**

Norway and Murman coast, *Phyllopoda, Cladocera, Copepoda*; **Olofsson, 99.**

Sweden, *Limnadia* (*Phyllop.*); **Lundblad, 85.**

Germany: *Oniscoidea*; **Verhoeff, 135**: *Cyclops*; **Farwick, 60**: *Harpacticidae* (*Copep.*); **van Douwe, 56**: Rhine province, *Copepoda, Cladocera*; **Farwick, 59.**

Holland, *Cladocera*; **Romyn, 108.**

British Isles, *Oniscoidea*; **Collinge, 40**: England and Scotland, *Oniscoidea*; **Collinge, 38**: Scotland, *Porcellio ratzeburgii* (*Onisc.*); **Collinge, 42**: *Porcellio rathkii, Haplophthalmus danicus* (*Onisc.*); **Collinge, 41**: *Oniscoidea*; **Collinge** Scot. Nat. **1917** pp. 277 and 295: Isle of May, *Oniscoidea*; **Evans, 58.**

England, *Ligidium hypnorum*; **Collinge** Scot. Nat. Edinburgh **1917** 1917 p. 94: England and Wales, *Oniscoidea*; **Collinge, 43**: Lancashire and Cheshire, *Oniscoidea*; **Standen, 118**: *Porcellio laevis*; **Standen** Lancs. Nat. **10** 1917 p. 81: Lancashire, *Trichoniscoides* (*Onisc.*); **Collinge, 36**: *Porcellio ratzeburgii*; **Collinge, 44**: Bath, *Ligidium hypnorum* (*Onisc.*); **Collinge, 39**: Hertfordshire, *Ostracoda, Cladocera*; **Popple, 103**: Norfolk, *Cladocera, Copepoda*; **Gurney, 67.**

Spain, Valencia, *Cladocera*; **Arévalo, 4.**

Switzerland, *Ostracoda, Cladocera, Copepoda*; **Borner, 9**: L. of Geneva, *Cladocera*; **Almeroth, 3.**

Austria, *Oniscoidea*; **Verhoeff, 134.**

Asia and Malay Archipelago. *e*

Japan, *Paratya* (*Carid.*); **Kemp, 81**: *Astacus*; **Parisi, 101.**

China, *Hymenosomatidae* (*Catom.*); **Kemp, 80.**

Assam, *Paratya* (*Carid.*); **Kemp, 81.**

Africa and Madagascar. *f*

Victoria Nyanza region, *Cladocera*; **Delachaux, 53.**

Natal, *Oniscoidea*; **Collinge, 47**: *Talitridae* (*Gamm.*); **Stebbing, 119**: *Potamonautes* (*Cyclom.*); **Stebbing, 121.**

North America. *g*

Ontario, *Nephropsidea, Caridea, Mysidacea, Asellota, Gammaridea*; **Huntsman, 76**: *Cambarus* (*Astac.*); **Huntsman, 77.**

Georgian Bay, Lake Huron, *Cladocera, Copepoda, Ostracoda*; **Sars, 111.**

Colorado, *Branchiopoda, Copepoda*; **Dodds, 55.**

Central and South America and West Indies. *h*

British Guiana, W. Indies, *Oniscoidea*; **Pearse, 102.**

Trinidad, *Calycuoniscus* (*Onisc.*); **Collinge, 35.**

Surinam, *Cyclopidae* (*Copep.*); **Chappuis, 25.**

Australasia. *i*

New Guinea, *Caridea, Brachyura*; **Roux, 110.**

Australia, *Potamonidae* (*Cyclom.*), *Astacopsis* (*Nephrop.*); **McCulloch, 88**: Australia and Norfolk I., *Paratya* (*Carid.*); **Kemp, 81**: S. Australia, *Deto* (*Onisc.*); **Chilton, 28**: *Oniscoidea, Phyllopoda*; **Chilton, 29**: W. Australia, *Phyllopoda*, **Schwartz, 115**: Northwest Australia, *Cyprinotus* (*Ostrac.*); **Skogsberg, 116.**

New Zealand, *Talorchestia* (*Gamm.*); **Chilton, 27**: *Lepidurus* (*Phyllop.*); **Herriott, 70**: *Paratya* (*Carid.*); **Kemp, 81**: Wellington, *Oniscoidea*; **Chilton, 31.**

C. Marine.

(The arrangement is based on that of Borradaile, Bibliography of the Marine Fauna, Challenger Society. 2nd Edn., 1914.)

General.

Sesarminae (*Catom.*); **Tesch, 132**: *Pontoniinae* (*Carid.*); **Borradaile, 10**: *Euphausiacea*; **Colosi, 51**: *Gammaridea*; **Chilton, 32** and **33**: *Flabellifera, Valvifera, Asellota*; **Nierstrasz, 95**: *Rhincalanus* (*Copep.*); **Schmaus, 114**: *Ostracoda* from "Liguria" Exp.; **Granata, 65.**

Atlantic and Pacific coasts of N. and S. America, *Lernaeidae* (*Copep.*); **Wilson, 142.**

"Valdivia" Exp., localities not given, *Oithona* (*Copep.*); **Rosendorn, 109.**

North Atlantic.

Macrura Reptantia; **Bouvier, 18**: *Euphausiacea*; **Colosi, 49**: *Copepoda*; **Sars, 113.**

Norway, *Copepoda*; **Sars, 112.**

Denmark, *Gammarus*; **Stephensen, 123.**

British seas, *Idoteidae* (Valv.); **Collinge, 34.**

St. Andrews, New Brunswick, *Crustacea* (plankton); **McMurrich, 89.**

Bay of Fundy, *Caprellidae*; **Huntsman, 75**: *Copepoda* (paras.); **Stock, 124.**

Passamaquoddy Bay, *Monstrilla* (*Copep.*), larvae of *Apoda* (?) and *Ascothoracida* (*Cirrip.*); **McMurrich, 90.**

New England coast, *Euphausiacea, Hyperiidea, Copepoda*; **Bigelow, 7.**

North Carolina, *Caridea, Paguridea*; **Hay, 69**: *Epicaridea*; **Hay, 68.**

Mediterranean.

Macrura Reptantia; **Bouvier, 18**: *Euphausiacea*; **Colosi, 49, 50.**

Quarto, Italy, *Copepoda*; **Brian, 19.**

Tropical Atlantic.

Stomatopoda, Cladocera; **Calman, 23.**

Southern Ocean.

S. Africa, *Decapoda, Mysidacea, Flabellifera, Gammaridea, Copepoda paras.*; **Stebbing, 122**: Durban Bay, *Decapoda, Flabellifera, Gammaridea*; **Stebbing, 120**: *Decapoda, Stomatopoda*; **Stebbing, 121.**

Australia, *Cirripedia*; **Broch, 21**: S. Australia *Serolis* (*Flabell.*), *Deto* (*Onisc.*); **Chilton, 28**: *Paridotea* (*Valv.*); **Collinge, 37**: Norfolk Id. and Sydney, *Elasmopus rapax* (*Gamm.*); **Chilton, 32.**

New Zealand, *Cirripedia*; **Borradaile, 12**: *Stomatopoda, Cumacea, Cladocera*; **Calman, 23**: *Hyale* (*Gamm.*) **Chilton, 30**: *Ampelisca* (*Gamm.*); **Chilton, 33.**

North Pacific.

Japan, *Galatheidea, Nephropsidea, Loricata, Thalassinidea*; **Parisi, 101.**

Brit. Columbia, *Copepoda* (paras.); **Wilson, 141.**

Washington, *Brachyura, Anomura*; **Way, 140.**

Eastern Pacific.

Chile, *Galatheidae*; **Porter, 104**: *Sphyrion laevigatum* (*Copep. paras.*); **Porter, 105.**

Indo-Pacific.

Pontoniinae (*Carid.*); **Borradaile, 10.**

Western Indian Ocean, *Caridea*; **Borradaile, 11.**

India, Siam, Japan, *Acetes* (*Penaeid.*); **Kemp, 77a**: India, Burma, Malay Peninsula, China (brackish water) *Leander, Palaemon* (*Carid.*); **Kemp, 78**: India, Siam, China, estuarine *Hymenosomatidae* (*Catom.*); **Kemp, 80.**

Gulf of Mannar, *Synidotea* (*Valv.*); **Collinge, 46.**

Malay Archipelago, *Caridea*; **de Man, 91.**

Java Sea, *Flabellifera*; **Nierstrasz, 95.**

New Guinea, *Decapoda, Stomatopoda*; **Roux, 110.**

Arctic.

Spitsbergen, *Decapoda*; **Hofsten, 73**: *Euphausiacea, Mysidacea*; **Björck, 8**: *Amphipoda, Isopoda, Cumacea*; **Oldevig, 98.**

Antarctic.

Graham Land, &c., *Euphausiacea, Mysidacea, Decapoda*; **Coutière, 52**: *Diastylis helleri* (*Cumac.*); **Calman, 24.**

McMurdo Sound, *Cumacea, Phyllocarida*; **Calman, 23.**

2. GEOLOGICAL.

Cambrian.

Lower Cambrian, Brit. Columbia, *Phyllopoda*; **Walcott, 137.**

Cretaceous.

Upper Cretaceous, S. Dakota, *Dromiacea, Oxystomata*; **Rathbun, 106.**

Cenomanian, Sicily, *Dromiacea*; **Checchia-Rispoli, 26.**

Tertiary.

Pliocene, California, *Cancer* (*Cyclom.*); **Rathbun, 107.**

III.—SYSTEMATIC. 2631

N.B.—The numerals in Clarendon type, when not indicating a Volume, refer to Titles.

BORRADAILE **14**.

Peracarida, TAIT **127**.

DECAPODA.

BAUMANN **6**; FASTEN **61**, **62**; HOFSTEN **73**.

Brachyura.

LONGLEY **84**; WAY **140**; YOSHIDA **145**.

OXYRHYNCHA.

Achacopsis thomsoni p. 24 figs., STEBBING Ann. S. Afric. Mus. **17**.

Platylambrus quemvis **sp. n.** Durban p. 3 figs., STEBBING Ann. Durban Mus. **2**.

CYCLOMETOPA.

DUNCAN **57**.

Atergatis floridus p. 7 figs., STEBBING Ann. Durban Mus. **2**.

†*Cancer urbanus* **sp. n.** Pliocene California p. 451 fig. RATHBUN Proc. U.S. Nat. Mus. **53**.

Eupotamonea new div. of *Potamonidae* p. 615, BOUVIER Paris C.R. Acad. Sci. **165**.

Geothelphusa leichardti p. 232, var. n. *plana* Queensland p. 236, figs., MCCULLOCH Rec. Austral, Mus. **11**.

Lobothelphusa **subg. n.** of *Hydrothelphusa* p. 620, BOUVIER Paris C.R. Acad. Sci. **165**.

Parapotamonea new div. of *Potamonidae* p. 617, BOUVIER t.c.

Paratelphusa (*Liotelphusa*) *wichmanni* p. 604, *beauforti* p. 606, *festiva* p. 608, figs, ROUX Nova Guinea **5**.

Potamonidae new classification pp. 615, 657, 751, BOUVIER Paris C.R. Acad. Sci. **165**.

CATOMETOPA.

YOSHIDA **146**.

Clistocoeloma tectum p. 222, fig., TESCH Zool. Meded. **3**.

Dotilla clepsydra **sp. n.** Durban p. 18 figs., STEBBING Ann. Durban Mus. **2**.

Elamena truncata p. 272, (*Trigonoplax*) *cimex* p. 274, *xavieri* **sp. n.** India p. 275, *unguiformis* p. 277, figs., KEMP Rec. Ind. Mus. **13**.

Hymenicoides **gen. n.** (*Hymenosomatidae*) p. 267, *carteri* **sp. n.** Calcutta p. 268 figs., KEMP t.c.

Macrophthalmus grandidierii p. 12 figs., STEBBING Ann. Durban Mus. **2**.

Ptychognathus demani **sp. n.** New Guinea p. 615 figs., ROUX Nova Guinea **5**.

Rhynchoplax wood-masoni p. 252, *alcocki* **sp. n.** India p. 253, *octagonalis* **sp. n.** India p. 256, *demeloi* **sp. n.** India p. 258, *exiguus* **sp. n.** Siam p. 260, *introversus* **sp. n.** fresh water, China p. 262, *nasalis* **sp. n.** Calcutta p. 265 figs., KEMP Rec. Ind. Mus. **13**.

Sarmatium fryatti **sp. n.** Java, &c., p. 216 figs., TESCH Zool. Meded. **3**.

Scopimera kochi **sp. n.** New Guinea p. 610 figs., ROUX Nova Guinea **5**.

Sesarma modesta p. 619, ROUX Nova Guinea **5**.—*S.* key to Indo-pacific spp. p. 235, *S. bocourti* p. 135, *eydouxi* p. 150, *lafondi* p.164, *modesta* p. 175, *ocypoda*, *gracillima* p. 179, *palawanensis* p. 183, *taeniolata* with subsp. n. *crebrestriata* p. 203, *villosa* p. 208, figs., TESCH Zool. Medod. **3**.

Uca lacteus p. 16 figs., STEBBING Ann. Durban Mus. **2**.

OXYSTOMATA.

†*Campylostoma pierrense* **sp. n.** Upper Cretaceous, S. Dakota, p. 389 figs., RATHBUN Proc. U.S. Nat. Mus. **52**.

DROMIACEA.

†*Dakoticancer* **gen. n.** (*Dakoticancridae*) p. 385, *overana* **sp. n.** Upper Cretaceous, S. Dakota, p. 386 figs., RATHBUN Proc. U.S. Nat. Mus **52**.

†*Dakoticancroideae* superfam. n. for *Dakoticancridae* fam. n. p. 385, RATHBUN t.c.

†*Distefania* **gen. n.** p. 174, *himerensis* **sp. n.** Cenomanian, Sicily, p. 177 figs., CHECCHIA RISPOLI Boll. Soc. Zool. Ital. **3**.

†*Homolopsis punctata* **sp. n.** Upper Cretaceous, S. Dakota, p. 388 figs, RATHBUN Proc. U.S. Nat. Mus. **52**.

Anomura.

WAY 140.

GALATHEIDEA.

PORTER 104.

Uroptychus ensirostris **sp. n.** Sagami Bay p. 4 fig., PARISI Pavia Atti. Soc. ital. sci. nat. **56.**

PAGURIDEA.

Pagurus cokeri **sp. n.** North Carolina p. 73, HAY Proc. Biol. Soc. Washington **30.**

Paguristes armatus **sp. n.** North Carolina p. 73, HAY t.c.

Paralithodes camtschatica fishery, canning, OKUDA & MATSUI **97**, MATSUI **92.**

HIPPIDEA.

[Vacant.]

Macrura.

NEPHROPSIDEA.

FRASER **64.**—HUNTSMAN **77.**—KNIGHT **82.**—MACCLEMENT **86.**—TAIT **129.**

Astacopsis serratus var. n. *hirsutus* N.S. Wales p. 238 fig., MCCULLOCH Rec. Austral. Mus. **11.**

Cambarus bartonii p. 157, *fodiens* p. 158, *diogenes*, *immunis*, p. 159, *limosus*, *propinquus*, p. 160, *virilis* p. 161, figs., HUNTSMAN Contrib. Canad. Biol. 1911–1914 fasc. ii.

Nephrops sagamiensis **sp. n.** Sagami Bay p. 15, *japonicus* p. 15 fig., PARISI Pavia Atti. Soc. ital. sci. nat. **56.**

Nephropsis atlantica p. 22 figs., BOUVIER Rés. camp. sci. Monaco **50.**

ERYONIDEA.

Eryoneicus Puritani p. 61, *Richardi* p. 68, *Alberti* p. 70, *spinoculatus* p. 74, *Faxoni* p. 78, figs., BOUVIER Rés. camp. sci. Monaco **50.**

Polycheles typhlops p. 34, *granulatus* p. 45, *sculptus* p. 51, *Grimaldii* p. 52, figs. BOUVIER t.c.—*P. demani* **sp. n.** Cape p. 28 figs., STEBBING Ann. S. Afric. Mus. **17.**

Willemoesia leptodactyla p. 33 figs., BOUVIER Rés. camp. sci. Monaco **50.**

LORICATA.

GRANT **66.**—NAKAZAWA **94.**

Panulirus regius p. 91 figs., BOUVIER Rés. camp. sci. Monaco **50.**

Paribacus ursus major juv. p. 13 fig., PARISI Pavia Atti Soc. ital. sci. nat. **56.**

Scyllarides sp. p. 11 fig., PARISI t.c.

Scyllarus arctus post-larval p. 108, *pygmaeus* p. 115 figs., BOUVIER Rés. camp. sci. Monaco **50.**

THALASSINIDEA.

Callianassa (*Trypaea*) *Harmandi* p. 24 fig., PARISI Pavia Atti. Soc. ital. sci. nat. **56.**

Calocaris Macandreae p. 119 figs., BOUVIER Rés. camp. sci. Monaco **50.** —*C. alcocki* p. 27 figs., STEBBING Ann. S. Afric. Mus. **17.**

Oxyrhynchaxius **gen. n.** (*Axiidae*) p. 17, *japonicus* **sp. n.** Enoshima p. 18 figs., PARISI Pavia Atti Soc. ital. sci. nat. **56.**

CARIDEA.

BORRADAILE **13.**—KEMP **79.**—MCCLENDON **87.**

Acanthephyra brachytelsonis p. 35 figs., STEBBING Ann. S. Afric. Mus. **17.**

Aegeon rugulosus p. 411 fig., BORRADAILE Trans. Linn. Soc. **17.**

Amphipalaemon gardineri fig., *cooperi*, p. 407, BORRADAILE t.c.

Anchistus miersi p. 388 fig., BORRADAILE t.c.

Automate kingsleyi **sp. n.** North Carolina p. 72, HAY Proc. Biol. Soc. Washington **30.**

Caridina nilotica and var. *gracilipes* p. 590, *weberi* var. *papuana* p. 591, *demani* p. 592 figs., *fecunda* p. 594 figs., ROUX Nova Guinea **5.**

Chorismus antarcticus p. 6, COUTIÈRE Crust. Schiz. et Decap 2e Exped. Antarct. Franç.

Conchodytes meleagrinae p. 393 fig., BORRADAILE Trans. Linn. Soc. **17.**

Coralliocaris macrophthalma p. 383, *japonica* p. 384 figs., *rathbuni* **nom. n.** for *tridentata* Rathbun p. 385, BORRADAILE t.c.—*C. wilsoni* **sp. n.** North Carolina p. 71, HAY Proc. Biol. Soc. Washington **30.**

Gnathophyllum fasciolatum p. 409 fig., BORRADAILE Trans. Linn. Soc. **17.** —*G. modestum* **sp. n.** North Carolina p. 72, HAY Proc. Biol. Soc. Washington **30.**

Harpiliopsis **gen. n.** (*Pontoniinae*), *beaupresi* p. 379, *depressus* p. 380, figs., BORRADAILE Trans. Linn. Soc. **17.**

Heterocarpoides **subg. n.** of *Heterocarpus* for *Dorodotes levicarina* Sp. Bate p. 284, DE MAN Zool. Meded. **3.**

Heterocarpus lepidus **sp. n.** p. 282, *ensifer* var. n. *parvispina* p. 282, *sibogae* **sp. n.** p. 283, Malay Archip., DE MAN t.c.—*H. unicarinatus, affinis* p. 399 figs., BORRADAILE Trans. Linn. Soc. **17.**

Hymenocera elegans p. 410 fig., BORRADAILE t.c.

Leander serratus mouth parts p. 62 figs., BORRADAILE Proc. Zool. Soc. **1917.**

Leander tenuipes p. 206, *annandalei* **sp. n.** China p. 211, *styliferus* p. 214, *carinatus* p. 219, *modestus* p. 221, *fluminicola* **sp. n.** India p. 223, *potamiscus* **sp. n.** India p. 225, figs., KEMP Rec. Ind. Mus. **13.**—*L. pacificus* p. 34 figs., STEBBING Ann. S. Afric. Mus. **17.**

Lysmata affinis p. 402, BORRADAILE Trans. Linn. Soc. **17.**

Lysmatella prima p. 404 fig., BORRADAILE t.c.

Nematocarcinus tenuirostris var. n. *sibogae* p. 279, DE MAN Zool. Meded. **3.** —*N. parvidentatus* p. 35 figs., STEBBING Ann. S. Afric. Mus. **17.**

Nikoides maldivensis p. 411 fig., BORRADAILE Trans. Linn. Soc. **17.**

Notocrangon antarcticus p. 2 figs., COUTIÈRE Crust. Schiz. et Decap. 2e Exped. Antarct. Franç.

Palaemon mirabilis **sp. n.** India p. 227 figs., KEMP Rec. Ind. Mus. **13.**—*P.* (*Eupalaemon*) *dispar* p. 595, *sundaicus, acanthosoma* p. 597, *minutus* **sp. n.** New Guinea p. 599 figs., *weberi* p. 600 (*Macrobrachium*) *placidulus, latimanus* p. 601, ROUX New Guinea **5.**

Palaemonella elegans, longirostris, p. 359 figs., BORRADAILE Trans. Linn. Soc. **17.**

Palaemonetes paludosa p. 154 fig., HUNTSMAN Contrib. Canad. Biol. 1911–1914 fasc. ii.

Pandalus (*Plesionika*) *gracilis* p. 398 fig., BORRADAILE Trans. Linn. Soc. **17.**

Paratya compressa p. 296 subsp. n. *improvisa* Japan p. 299, *curvirostris* p. 301, *australiensis* **sp. n.** N.S. Wales p. 303 subsp. n. *norfolkensis* Norfolk I. p. 305 figs., KEMP Rec. Ind. Mus. **13.**

Periclimenaeus robustus p. 378, *fimbriatus* p. 379 figs., BORRADAILE Trans. Linn. Soc. **17.**

Periclimenes (*Cristiger*) *brocki* p. 363, *frater, incertus, commensalis* p. 364, (*Corniger*) *ceratophthalmus, cornutus* p. 365, (*Falciger*) *spiniferus* p. 369, *nilandensis, affinis* p. 372, *dubius, compressus* p. 373, *brocketti, pottsi* p. 374, *suvadivensis, seychellensis* p. 375, *kolumadulensis* p. 376, figs., BORRADAILE t.c.

Peripandalus **gen. n.** for *Pandalus serratus* A.M.E. p. 281, DE MAN Zool. Meded. **3.**

Phyllognathia ceratophthalma p. 409 fig., BORRADAILE Trans. Linn. Soc. **17.**

Plesionika longipes var. n. *indica* p. 279, *assimilis* **sp. n.** Malay Archip., p. 280, DE MAN Zool. Meded. **3.**

Pontonia tyrrhena p. 390 figs., BORRADAILE Trans. Linn. Soc. **17.**

Pontonides **gen. n.** (*Pontoniinae*), *maldivensis* p. 387 fig., BORRADAILE t.c.

Pontoniopsis comanthi p. 377 fig., BORRADAILE t.c.

Rhynchocinetes typus p. 27 figs., STEBBING Ann. Durban Mus. **2.**

Thalassocaris affinis, maldivensis p. 400 figs., BORRADAILE Trans. Linn. Soc. **17.**

Thor maldivensis p. 401 fig., BORRADAILE t.c.

Urocaridella gracilis p. 352 fig., BORRADAILE t.c.

Urocaris psamathe p. 354 fig., BORRADAILE t.c.

Xiphocaridina see *Paratya.*

PENAEIDEA.

TERAO **131.**

Acetes indicus p. 47, *erythraeus* p. 51, *insularis* **sp. n.** Borneo p. 54, *japonicus* p. 56, figs., KEMP Rec. Ind. Mus. **13.**

Penaeus semisulcatus p. 441, *durbani* **sp. n.** Durban p. 442, figs., STEBBING Ann. Durban Mus. **1.**

Solenocera africanus **sp. n.** Cape p. 32 figs., STEBBING Ann. S. Afric. Mus. **17.**

STENOPIDEA.

[Vacant.]

EUPHAUSIACEA.

BIGELOW **7.**—BJÖRCK **8.**—COLOSI **48, 49.**—COUTIÈRE **52.**

Classification, COLOSI **51.**

Euphausia brevis p. 123 fig., COLOSI Firenze Bull. Soc. Entom. **48.** —— *E. krohnii* p. 180, *brevis* p. 181, *lucens* p. 183, *uncinata* **sp. n.** Falkland Is. p. 186, *patachonica* **sp. n.** Falkland Is. p. 187, *mucronata* p. 188, figs., COLOSI Racc. planct. "Liguria" **2.**

Nematoscelis microps p. 128 fig., COLOSI Firenze Bull. Soc. Entom. **48.** —*N. megalops* p. 192 figs., COLOSI Racc. planet. "Liguria" **2.**

Pseudeuphausia latifrons p. 179 figs., COLOSI t.c.

Stylocheiron carinatum p. 194, *armatum* **sp. n.** Indian Ocean and Caribbean Sea p. 196, *elongatum* p. 196, *affine*, *longicorne* p. 197, *abbreviatum* p. 198 figs., COLOSI t.c.

MYSIDACEA.

BJÖRCK **8.**—COUTIÈRE **52.**—STEBBING **122.**

Mysis relicta p. 153 figs., HUNTSMAN Contrib. Canad. Biol. 1911–1914 fasc. ii.

SYNCARIDA.

Bathynella natans p. 489 figs., CALMAN Q. J. Microsc. Sci. **62.**

STOMATOPODA.

STEBBING **121.**

Larval and post-larval spp. p. 141, CALMAN Terra Nova Exp. Zool. **3.**

Squilla brasiliensis **sp. n.** off Cape Frio p. 139 figs., CALMAN t.c.

CUMACEA.

CALMAN **24.**—OLDEVIG **98.**

Campylaspis antarctica p. 155 fig., CALMAN Terra Nova Exp. Zool. **3.**

Colurostylis lemurum **sp. n.** New Zealand p. 153 figs., CALMAN t.c.

Cyclaspis similis p. 147 fig., *argus* p. 148, *coelebs* **sp. n.** New Zealand p. 150 figs., notes on other spp., CALMAN t.c.

Diastylis neozealanica p. 152 figs., CALMAN t.c.

TANAIDACEA.

[Vacant.]

ISOPODA.

OLDEVIG **98.**—OMER-COOPER **100.** —TAIT **126, 130.**

ASELLOTA.

ALLEE **1.**

Asellus communis p. 147 figs., HUNTSMAN Contrib. Canad. Biol. 1911–1914 fasc. ii.

Mancasellus tenax p. 148 figs., HUNTSMAN t.c.

PHREATOICIDEA.

[Vacant.]

FLABELLIFERA.

STEBBING **122.**

Alcirona macronema p. 97 figs., NIERSTRASZ Zool. Meded. **3.**

Cassidina typus p. 109 fig., NIERSTRASZ t.c.

Cirolana rossi p. 91, *punctata* p. 94 figs., NIERSTRASZ t.c.

Livoneca nasicornis **sp. n.** Java Sea p. 87 figs., NIERSTRASZ t.c.

Serolis tuberculata p. 394, *australiensis* p. 396, *longicaudata* p. 397, *minuta* p. 397, *bakeri* **sp. n.** S. Australia p. 398, figs., CHILTON Trans. R. Soc. S. Australia **41.**

Sphaeroma quadridentatum, *quoyanum*, p. 105, *sieboldi* p. 107, figs., NIERSTRASZ Zool. Meded. **3.**—*S. walkeri* p. 444 figs., STEBBING Ann. Durban Mus. **1.**

VALVIFERA.

Glyptonotus antarcticus p. 246 figs., TAIT Edinburgh Proc. R. Soc. **37.**

Idotea baltica p. 737, *pelagica* p. 739, *neglecta* p. 740, *emarginata* p. 741, *granulosa* p. 742, *sarsi* **sp. n.** St. Andrews p. 743, *viridis* p. 745, *metallica* p. 746, *linearis* p. 747 figs., COLLINGE Edinburgh Trans. R. Soc. **51.**—*I. peroni* p. 112 fig., NIERSTRASZ Zool. Meded. **3.**

Paridotea bakeri **sp. n.** S. Australia p. 112 figs., COLLINGE J. Zool. Research **2.**—*Paridothea ungulata* p. 113 figs., NIERSTRASZ Zool. Meded. **3.**

Pentidothea elongata p. 114 fig., NIERSTRASZ t.c.

Synidotea variegata **sp. n.** Gulf of Mannar p. 2 figs., COLLINGE Rec. Ind. Mus. **13.**

Synisoma **nom. n.** for *Stenosoma* auctt. p. 750, *lancifer* p. 751, *acuminata* p. 752, figs., COLLINGE Edinburgh Trans. R. Soc. **51.**

Zenobiana prismatica p. 749 figs., COLLINGE t.c.

EPICARIDEA.

HILTON **72.**

Phryxus subcaudalis **sp. n.** on *Synalpheus* N. Carolina p. 569 figs., HAY Proc. U. S. Nat. Mus. **51.**

Pseudione upogebiae **sp. n.** on *Upogebia* N. Carolina p. 572 figs., HAY t.c.

Synsynella **gen. n.** near *Bopyriscus*, *deformans* **sp. n.** on *Synalpheus* N. Carolina p. 571 figs., HAY t.c.

ONISCOIDEA.

COLLINGE **39, 40, 41, 42, 44.**—EVANS **58.**—STANDEN **118.**—TAIT **125.**—THOMPSON **133.**

Armadillidium vulgare varr. n. *virescens* p. 124, *aureolineatus*, *tesselatus*, *marginatus*, *cooperi*, *bicolor*, p. 125 England and Scotland, COLLINGE J. Zool. Research **2.**—*A. pulchellum* var. n. *flavus* England p. 125, COLLINGE t.c.—*A. depressum* var. n. *maculatum* England p. 115, COLLINGE Scot. Nat. **1917.**

Calycuoniscus spinosus **sp. n.** Trinidad p. 29 figs., COLLINGE J. Zool. Research **2.**

Circoniscus **gen. n.** (*Armadillididae*) *gaigei* **sp. n.** Brit. Guiana p. 4 figs., PEARSE Occ. Pap. Mus. Zool. Univ. Michigan **46.**

Cubaris milleri **sp. n.** Wellington p. 327 figs., CHILTON Ann. Mag. Nat. Hist. **19.**—*C. claytonensis* **sp. n.** S. Australia p. 479 figs., CHILTON Trans. R. Soc. S. Australia **41.**—*C. warreni* p. 569, *reticulatus p.* 570, *burnupi* p. 572, *natalensis* p. 573, *longicauda* p. 574, *trilobata* p 575, **spp. n.**, Natal, figs. COLLINGE Ann. Natal Mus. **3.**—*C. gaigei* **sp. n.** Brit. Guiana p. 2 figs., PEARSE Occ. Pap. Mus. Zool. Univ. Michigan **46.**

Cylisticus convexus var. n. *brunneus* England p. 124, COLLINGE J. Zool. Research **2.**

Deto marina p. 399 figs., CHILTON Trans. R. Soc. S. Australia **41.**

Haplophthalmus mengii var. n. *flavovirescens* Scotland p. 123, COLLINGE J. Zool. Research **2.**

Hemiporcellio strzelecki **sp. n.** S. Australia p. 477 fig., CHILTON Trans. R. Soc. S. Australia **41.**

Leptotrichus emarginatus **sp. n.** Brit. Guiana p. 5 figs., PEARSE Occ. Pap. Mus. Zool. Univ. Michigan **46.**

Mesoniscus subterraneus p. 54, varr. n. *subterraneus* and *nivalis* p. 55, VERHOEFF Zool. Anz. **49.**—*M. calcivagus* p. 504, *subterraneus* p. 505, **spp. n.**, Austria figs., VERHOEFF Zool. Jahrb. Syst. **37.**

Oniscus asellus varr. n. *flavescens*, *flavobrunneus*, England p. 123, COLLINGE J. Zool. Research **2.**—*O. asellus* var. n. *bicolor* Cheshire p. 266, COLLINGE Lancs. Nat. **9.**

Philoscia muscorum var. n. *virescens* England p. 123, COLLINGE J. Zool. Research **2.**—*P. muscorum* var. n. *standeni* Wales, Cheshire p. 266, COLLINGE Lancs. Nat. **9.**—*P. warreni* p. 578, *dilectum* p. 579, **spp. n.**, Natal figs., COLLINGE Ann. Natal Mus. **3.**

Platyarthrus hoffmannseggii var. n. *flavobrunneus* England p. 124, COLLINGE J. Zool. Research **2.**—*P.* occ. apart from ants p. 172, COLLINGE Lancs. Nat. **10.**

Porcellio scaber var. n. *flavobrunneus*, *P. laevis* var. n. *flavovirescens*, *maculatus* England p. 124, COLLINGE J. Zool. Research **2.**—*P. dilatatus* var. n. *flavus* Derbyshire p. 266, COLLINGE Lancs. Nat. **9.**—*P. graevei* **sp. n.** Germany p. 353, VERHOEFF Zool. Anz. **48.**

Porcellionides pruinosus var. n. *flavobrunneus* Scotland p. 124, COLLINGE J. Zool. Research **2.**

Trichoniscoides scabrous **sp. n.** Lancashire p. 95, COLLINGE t.c.

Trichoniscus noricus **sp. n.** Germany p. 353, *caroli* **nom. n.** for *pusillus* Carl, p. 354, VERHOEFF Zool. Anz. **48.**—*T. alemannicus* **sp. n.** with varr. n. *alemannicus* and *striatus*, *noricus* **sp. n.** with varr. n. *noricus* and *rotundatus* p. 46, *muscivagus* **sp. n.** p. 47, *nivatus* **sp. n.**, *sulcatus* **sp. n.**, *caroli* **nom. n.** for *pusillus* Carl *non* Brandt p. 48, *pusillus* subsp. n. *caelebs* p. 53, Europe, figs., VERHOEFF Zool. Anz. **49.**

AMPHIPODA.

OLDEVIG **98.**

GAMMARIDEA.

ALLEN & SEXTON **2.**—CHILTON **32.**—HILTON **71.**—LÉGER ET HESSE **83.**—NOWLIN & SMITH **96.**—STEBBING **120.**—TAIT **130.**—WATSON **139.**

Ampelisca eschrichtii p. 87 figs., CHILTON J. Zool. Research **2.**

Eucrangonyx gracilis p. 152 fig., HUNTSMAN Contrib. Canad. Biol. 1911–1914 fasc. ii.

Exhyalella **gen. n.** (near *Hyalella*) *natalensis* **sp. n.** Durban p. 435, STEBBING Ann. Mag. Nat. Hist. **20.**

Gammarus fasciatus, *limnaeus*, p. 151 figs., HUNTSMAN Contrib. Canad. Biol. 1911–1914 fasc. ii.—*G. zaddachi* as var. of *G. locusta* p. 43 figs., STEPHENSEN Kjøbenhavn Nath. Medd. **68.**

Hyale grenfelli ♀ p. 273 figs., CHILTON Ann. Mag. Nat. Hist. **19.**

Hyalella knickerbockeri p. 152 fig., HUNTSMAN Contrib. Canad. Biol. 1911–1914 fasc. ii.

Ichnopus macrobetomma **sp. n.** Cape p. 38 figs., STEBBING Ann. S. Afric. Mus. **17.**

Metopa rotundus **sp. n.** Cape p. 39 figs., STEBBING t.c.

Pontoporeia hoyi p. 149 fig., HUNTSMAN Contrib. Canad. Biol. 1911–1914 fasc. ii.

Talitriator africanus p. 330, STEBBING Ann. Mag. Nat. Hist. **19.**

Talorchestia quoyana p. 294, *tumida* p. 296, *telluris* p. 299 figs., CHILTON Trans. N. Zeal. Inst. **49.**

HYPERIIDEA.

BIGELOW **7.**

CAPRELLIDEA.

Mayerella **gen. n.** *limicola* **sp. n.** Bay of Fundy p. 40 figs., HUNTSMAN Contrib. Canad. Biol. 1911–1914 fasc. i.

PHYLLOCARIDA.

CALMAN **23.**

BRANCHIOPODA.

DODDS **55**—OLOFSSON **99.**—SOLLAUD **117.**

PHYLLOPODA.

CHILTON **29.**—HERRIOTT **70.**

Limnadia lenticularis p. 249 figs., LUNDBLAD Zool. Beiträge aus Uppsala **4.**

Limnadopsis birchii p. 4 figs., SCHWARTZ Stockholm Vet.-Ak. Handl. **52** No. 15.

Podochirus **gen. n.** *dubius* **sp. n.** Australia p. 7 fig., SCHWARTZ t.c.

†*Shafferia* **gen. n.** near *Burgessia*, *cisina* **sp. n.** Lower Cambrian, Brit. Columbia p. 71 figs., WALCOTT Smithsonian Misc. Coll. **67.**

CLADOCERA.

ALMEROTH **3.**—ARÉVALO **4.**—BANTA **5.**—BORNER **9.**—CALMAN **23.**—FARWICK **59.**—POPPLE **103.**—SARS **111.**

Acantholeberis curvirostris p. 27 fig., GURNEY Norwich Trans. Nat. Soc. **10.**

Alona poppei p. 85, *davidi* var. *iheringi* p. 86 figs., DELACHAUX Rev Suisse Zool. **25.**—*A. rustica* p. 28 figs., GURNEY Norwich Trans. Nat. Soc. **10**

Alonella hispanica **sp. n.** Valencia p. 172 fig., ARÉVALO Bol. Soc. Arag. **16.**

Ceriodaphnia valentina **sp. n.** Valencia p. 142 fig., Arévalo t.c.—*C. reticulata* var. *dubia* p. 80, *C. rigaudi, cornuta*, p. 81 figs., Delachaux Rev. Suisse Zool. **25.**

Chydorus barroisi, piger p. 89, *ventricosus* p. 91 figs., Delachaux t.c.—*C. piger* p. 29 figs., Gurney Norwich Trans. Nat. Soc. **10.**

Daphnia obtusa p. 26 figs., Gurney t.c.

Drepanothrix dentata p. 27 fig., Gurney t.c.

Ilyocryptus sordidus var. n. *longisetus* p. 143 fig., Arévalo Bol. Soc. Arag. **16.**—*I. silvaeducensis* **sp. n.** Holland p. 10, Romyn Helder Tyds. Ned. Dierk. Ver. **16.**

Macrothrix albuferae **sp. n.** Valencia p. 166 fig., Arévalo Bol. Soc. Arag. **16.**

Pleuroxus Morotei **sp. n.** Valencia p. 174 fig., Arévalo t.c.

Pleuroxus assimilis p. 88 fig., Delachaux Rev. Suisse Zool. **25.**

Rhynchotalona rostrata p. 83 fig., Delachaux t.c.

COPEPODA.

Bigelow **7.**—Dodds **55.**—van Douwe **56.**—Farwick **59, 60.**—Gurney **67.**—Porter **105.**—Sars **111.**—Stock **124.**

Achtheinus dentatus p. 41 figs., Stebbing Ann. S. Afric. Mus. **17.**

Attheyella arctica p. 275 figs., Olofsson Zool. Bidr. Uppsala **5.**

Brachiella dentata **sp. n.** Brit. Columbia p. 97 figs., Wilson Contrib. Canadian Biol. 1906–1910.

Cardiodectes **gen. n.** near *Lernaeenicus* p. 50, *medusaeus* p. 52, *bellottii* p. 55 figs., Wilson Proc. U.S. Nat. Mus. **53.**

Chondracanthus palpifer p. 93, *pinguis* p. 94 **spp. n.** Brit. Columbia figs., Wilson Contrib. Canadian Biol. 1906–1910.

Cluvella parva p. 95, *robusta* p. 96 **spp. n.** Brit. Columbia figs., Wilson t.c.

Collipravus **gen. n.** (*Lernaeenicinae*) p. 78, *parvus* **sp. n.** on *Jenkinsia* Bahamas p. 79 figs., Wilson Proc. U.S. Nat. Mus. **53.**

Cyclops staheli p. 221, *operculatus* p. 223 **spp. n.** Surinam figs., Chappuis Zool. Anz. **49.**—*C. capillatus, languidoides*, p. 273, *agilis* p. 274 figs., Olofsson Zool. Bidr. Uppsala **5.**

Haemobaphes cyclopterina p. 95, *enodis* **sp. n.** on *Lycodapus* California p. 97, *dicerans* **sp. n.** on *Chaeturichthys* Japan p. 98 figs., Wilson Proc. U.S. Nat. Mus. **53.**

Hemicyclops purpureus p. 146 figs., Sars Crust. Norway **6.**

Heterocope saliens p. 62 figs., Borner Jahresb. Natf. Ges. Graub. **57.**

Hippomolgus **gen. n.** (*Clausidiidae*) p. 147, *furcifer* **sp. n.** Norway p. 148 figs., Sars Crust. Norway **6.**

Laophonte quaterspinata **sp. n.** Quarto Italy p. 174 figs., Brian Monitore zool. ital. **28.**

Lepeophtheirus nanaimoensis p. 89, *pravipes* p. 90 **spp. n.** Brit. Columbia figs., Wilson Contrib. Canadian Biol. 1906–1910.

Lernaea Linn. = *Lernaeocera* auctorum *nec* Blainville p. 36, Wilson Proc. U.S. Nat. Mus. **53.**—*Lernaea*, key to spp. p. 192, *anomala, dolabrodes* **spp. n.** United States p. 194 figs., Wilson Bull. Bur. Fish. **35.**

Lernaeinae subfam. n. of *Lernaeidae* p. 35, Wilson Proc. U.S. Nat. Mus. **53.**

Lernaeenicinae subfam. n. of *Lernaeidae* p. 42, Wilson t.c.

Lernaeenicus radiatus p. 59, *polyceraus* **sp. n.** on *Upeneus* N. Carolina p. 62, *affixus* **sp. n.** on *Microgadus*, etc. Woods Hole p. 64, *longiventris* **sp. n.** on *Caranx*, etc., Atlantic U.S. p. 66 figs., Wilson t.c.

Lernaeocera Blainville = *Lernaea* auctorum *nec* Linnaeus p. 83, *branchialis* p. 85 figs., Wilson t.c.

Lernaeocerinae subfam. n. of *Lernaeidae* p. 81, Wilson t.c.

Lernaeolophus sultanus p. 91 figs. Wilson t.c.

Lichomolgus albens p. 151, *forficula* p. 153, *marginatus* p. 155, *furcillatus* p. 156, *canui* **sp. n.** Norway p. 157, *poucheti* p. 158, *tenuifurcatus* **sp. n.** Norway p. 160, *agilis* p. 161 figs., SARS Crust. Norway **6.**

Macrocheiron fucicolum p. 163, *hirsutipes* p. 165 figs., SARS t.c.

Monstrilla canadensis **sp. n.** Passamaquoddy Bay p. 47 figs., MCMURRICH Trans. R. Soc. Canada (3) **11** sect. iv.

Moraria schmeili p. 60 figs., BORNER Jahresb. Natf. Ges. Graub. **57.**

Oithona spp. males descr., *tenuis*, *hamata*, **spp. n.**, *frigida* var. [n.] *pseudofrigida*, p. 302, ROSENDORN Zool. Anz. **48.**

Peniculus fistula p. 6 fig., BRIAN Bul. Inst. Ocean. Monaco **324.**—*P. clavatus* p. 46, *fissipes* **sp. n.** Str. of Magellan p. 47 figs., WILSON Proc. U.S. Nat. Mus. **53.**

Pennella antarctica p. 116, *filosa* p. 119, *instructa* **sp. n.** on *Xiphias* New England p. 122 figs., WILSON t.c.

Phrixocephalus triangulus on *Neopercis* Japan p. 76, *diversus* on *Callionymus* Japan p. 77, **spp. n.**, figs., WILSON t.c.

Pseudanthessius gracilis p. 167, *liber* p. 169, *assimilis* **sp. n.** Norway p. 170, *sauvagei* p. 171 figs., SARS Crust. Norway **6.**

Rhincalanus cornutus form. n. *atlantica* p. 306, *gigas* p. 307 figs., SCHMAUS Zool. Anz. **48.**

Sarcotretes lobatus **sp. n.** on *Benthosema* Atlantic U.S. p. 72 figs., WILSON Proc. U.S. Nat. Mus. **53.**

Sphyrion laevigatum p. 3 figs., BRIAN Bul. Mus. Ocean. Monaco **324.**

Trifur **gen. n.** (*Lernaeocerinae*) p. 101, *tortuosus* **sp. n.** on *Salilota*, S. America, p. 102 figs., WILSON Proc. U.S. Nat. Mus. **53.**

Urocopia **gen. n.** (*Lichomolgidae*) p. 9, *singularis* **sp. n.** N. Atlantic p. 1 figs., SARS Bergens Mus. Aarb. **1916–17** No. 4.

BRANCHIURA.

Argulus borealis **sp. n.** Brit. Columbia. p. 85, *pugettensis* p. 87, figs., WILSON Contrib. Canadian Biol. 1906–1910.

OSTRACODA.

BORNER **9.**—POPPLE **103.**—SARS **111.**—YATSU **144.**

Asterope pacifica p. 146, *grisea* p. 147 figs., GRANATA Racc. planct. "Liguria" **2.**

Codonocera sp. p. 138 figs., GRANATA t.c.

Cyclasterope Liguriae p. 147, figs., GRANATA t.c.

Cypridina hirsuta p. 130, *Sennae* p. 131, *Aloysii* p. 132 figs., GRANATA t.c.

Cyprinotus gregarius **sp. n.** Australia p. 10 figs., SKOGSBERG Stockholm Vet.-Ak. Handl. **52** No. 15.

Euconchoecia aculeata p. 154 figs., GRANATA Racc. planct. "Liguria" **2.**

Philomedes Muelleri p. 139, figs., GRANATA t.c.

Pyrocypris Chierchiae p. 134, *sinuosa* p. 137 figs., GRANATA t.c.

Sarsiella ornithoides p. 141 figs., GRANATA t.c.

CIRRIPEDIA.

DELSMAN **54.**

Acasta hirsuta p. 10, *antipathidis* p. 13,, **spp. n.**, Australia figs., BROCH Stockholm Vet.-Ak. Handl. **52** No. 8.

Balanus Mjöbergi p. 7, *filigranus* p. 8, **spp. n.**, Australia figs., BROCH t.c.

Dendrogaster larva p. 59 fig., MCMURRICH Trans. R. Soc. Canada (3) **11** Sect. iv.

Lepas affinis Borr.=*L. anatifera* var. *c.* Jennings p. 229, BORRADAILE Ann. Mag. Nat. Hist. **19.**

Proteolepas? larvae p. 50 figs., MCMURRICH Trans. R. Soc. Canada (3) **11** Sect. iv.

XI. ARACHNIDA

TO WHICH ARE ADDED

GIGANTOSTRACA (XIPHOSURA, TRILOBITA, EURYPTERIDA), PANTOPODA, TARDIGRADA, PENTASTOMIDA, MYRIOPODA and PROTOTRACHEATA

ARRANGED BY

W. T. CALMAN, D.Sc.

CONTENTS.

PAGE

Gigantostraca.

I. TITLES=2800 4

II. SUBJECT-INDEX=2803–2827.. 4

III. SYSTEMATIC INDEX=2831:—

Trilobita 5

Xiphosura, etc. 5

Eurypterida 5

Pantopoda.

I. TITLES=2800 6

II. SUBJECT-INDEX=2803–2827 6

III. SYSTEMATIC INDEX=2851 6

PAGE

Arachnida (incl. Tardigrada and Pentastomida).

I. Titles=3000 7

II. Subject-Index=3003–3027 :—

General, Economics 11
Structure 11
Physiology 11
Development.. 11
Ethology 11
Variation and Aetiology 12
Distribution (Geographical and Geological) 12

III. Systematic Index=3031 :—

General (vacant).
Scorpiones 13
Pedipalpi 13
Palpigradi (vacant).
Araneae 13
Avicularidae 13
Uloboridae 14
Dictynidae.. 14
Sicariidae 14
Dysderidae 15
Caponiidae 15
Drassidae 15
Pholcidae 15
Theridiidae 15
Argiopidae 15
Mimetidae.. 15
Thomisidae 16
Clubionidae 16
Agelenidae 16
Pisauridae 16
Lycosidae 16
Salticidae 16
Solifugae 16
Pseudoscorpiones 16
Opiliones 17
Ricinulei, etc. (vacant).

PAGE

Acari 17
Oribatidae, etc. 17
Gamasidae. 17
Ixodidae and Argasidae 18
Trombidiidae, etc. 18
Hydrachnidae 18
Halacaridae 19
Bdellidae (vacant).
Sarcoptidae 19
Tyroglyphidae 19
Demodicidae 19
Eriophyidae 19

Tardigrada 19

Pentastomida (vacant).

Myriopoda.

I. Titles=3400 20

II. Subject-Index=3403–3427 :—
General (vacant).
Structure 21
Physiology (vacant).
Development.. 21
Ethology 21
Variation and Aetiology 21
Distribution (Geographical and Geological) 21

III. Systematic Index=3431 :—
Chilopoda 21
Symphyla 22
Pauropoda (vacant).
Diplopoda 22

Prototracheata.

I. Titles=3200 24

II. Subject-Index=3203–3227 24

III. Systematic=3231 24

GIGANTOSTRACA.

I.—TITLES.

Burling, L. D. *Protichnites* and *Climactichnites*; a critical study of some Cambrian trails. Amer. J. Sci. New Haven Conn. ser. 4 **44** 1917 (387–398) figs. **1**

Burling, L. D. Was the Lower Cambrian Trilobite supreme? Ottawa Nat. **31** 1917 (77–79) figs. **2**

Holmgren, N. Zur vergleichenden Anatomie des Gehirns von Polychaeten, Onychophoren, Xiphosuren, Arachniden, Crustaceen, Myriopoden und Insekten. Vorstudien zu einer Phylogenie der Arthropoden. Stockholm Vet.-Ak. Handl. **56** No. 1 1916 (303 pp.) 12 pls. 64 text figs. **3**

Nukada, S. Über die Automatie und die Koordination des Herzens. (Biologische Untersuchungen über das Herz des *Limulus longispina*). Tokyo Mitt. med. Fak. **19** 1917 (1–164) 21 pls. **4**

Raymond, P. E. New and old Silurian Trilobites from Southeastern Wisconsin, with notes on the genera of the Illaenidae. Cambridge Mass. Bull. Mus. Comp. Zool. Harvard **60** No. 1 1916 (1–41) 4 pls. **5**

Raymond, P. E. Beecher's classification of Trilobites, after twenty years. Amer. J. Sci. New Haven Conn. ser. 4 **43** 1917 (196–210) figs. **6**

Stainier, X. On a new Eurypterid from the Belgian Coal Measures. London Q. J. Geol. Soc. **71** 1917 (639–647) pl. liii. **7**

Walcott, C. D. Cambrian geology and paleontology. iv. No. 2. The Albertella fauna in British Columbia and Montana. Washington D.C. Smithsonian Inst. Misc. Collect. **67** No. 2 1917 (9–59) pls. i–vii. **8**

Walcott, C. D. Cambrian geology and paleontology. iv. No. 3. Fauna of the Mount Whyte formation. Washington D.C. Smithsonian Inst. Misc. Collect. **67** No. 3 1917 (61–114) pls. viii–xiii. **9**

II.—SUBJECT INDEX

N.B.—The number in Clarendon, when not referring to a Volume, refers to the list of Titles.

GENERAL = 2803–2823.

Structure, Heart, *Limulus*; **Nukada, 4.**—Nervous System, *Limulus*; **Holmgren, 3.**

Structure and classification, *Trilobita*; **Raymond, 6.**

Physiol. of heart, *Limulus*; **Nukada, 4.**

Mutilation, *Trilobita*; **Burling, 2.**

DISTRIBUTION = 2827.

(Geological.)

Cambrian.

Tracks possibly of *Gigantostraca*; **Burling, 1**: Lower Cambrian, Brit. Columbia, *Trilobita*; **Walcott, 9**: Middle Cambrian, Canada and Montana, *Trilobita*; **Walcott, 8.**

Silurian.

Wisconsin, *Trilobita*; **Raymond, 5.**

Carboniferous.

Coal measures, Belgium, *Eurypterus*; **Stainier, 7.**

III.—SYSTEMATIC INDEX = 2831.

N.B.—The number in Clarendon type, when not that of a Volume, refers to the list of Titles.

†TRILOBITA.

BURLING 2.—RAYMOND 6.

Actinolobus americanus **sp. n.** Silurian, Wisconsin, p. 23 figs., RAYMOND Bull. Mus. Comp. Zool. Harvard **60.**

Agraulos stator p. 28, fig., WALCOTT Smithsonian Misc. Coll. **67.**—*A. charops* p. 72, (?) *unca* p. 73, **spp. n.**, Lower Cambrian, Brit. Columbia, figs., WALCOTT t.c.

Albertella bosworthi p. 38, *helena* p. 39, *levis* **sp. n.** p. 39, Middle Cambrian, Canada figs., WALCOTT t.c.

Bathyuriscus rossensis p. 46, (*Poliella*) *chilo* p. 50, **spp. n.** Middle Cambrian, Canada, figs., WALCOTT t.c.

Bumastus niagarensis p. 17, *dayi* **sp. n.**, *decipiens* **sp. n.** p. 18, *tenuis* **sp. n.** p. 19, *indeterminatus* p. 22, Silurian, N. America, RAYMOND Bull. Mus. Comp. Zool. Harvard **60.**

Calymene breviceps p. 27, *celebra* p. 28, **spp. n.**, Silurian, Wisconsin, figs., RAYMOND t.c.

Ceratocephala goniata p. 24 figs., RAYMOND t.c.

Cheirurus niagarensis p. 30, *welleri* **sp. n.** p. 34, *dilatatus* **sp. n.** p. 36, *patens* **sp. n.** p. 37, Silurian, Wisconsin, figs., RAYMOND t.c.

Crepicephalus chares **sp. n.** Middle Cambrian, Canada p. 35 figs., WALCOTT Smithsonian Misc. Coll. **67.**—*C. cecinna* p. 99, *celer* p. 101 **spp. n.**, Lower Cambrian Brit. Columbia figs., WALCOTT t.c.

Encrinurus reflexus **sp. n.** Silurian, Wisconsin p. 25 figs., RAYMOND Bull. Mus Comp. Zool. Harvard **60.**

Illaenidae classif. and genera p. 3, RAYMOND t.c.

Liocalymene **gen. n.** (*Calymenidae* type *clintoni* Vanuxem p. 29, RAYMOND t.c.

Neolenus constans **sp. n.** Middle Cambrian, Canada p. 45 figs., WALCOTT Smithsonian Misc. Coll. **67.**

Olenopsis cf. *americanus* p. 37 figs., WALCOTT t.c.—*O. cleora* p. 74, *crito* p. 75, *leuka* p. 77, **spp. n.**, Lower Cambrian, Brit. Columbia figs., WALCOTT t.c.

Ptychoparia candace p. 28, (?) *charax* p. 31, (?) *cilles* p. 32, *pylas* p. 33, **spp. n.**, Middle Cambrian, N. America figs., WALCOTT t.c.—*P. adina* p. 78, *carina* p. 80, (?) *cercops* p. 81, (?) *cleadas* p. 83, *cleon* p. 84, *clusia* p. 85, *cossus* p. 86, *cuneas* p. 87, *gogensis* p. 88, *lux* p. 90, *perola* p. 91, *pia* p. 93, *skapta* p. 95, *thia* p. 96, **spp. n.**, Lower Cambrian, Brit. Columbia figs., WALCOTT t.c.

Trochurus nasutus p. 23 figs., RAYMOND Bull. Mus. Comp. Zool. Harvard **60.**

Vanuxemella nortia p. 37 fig., WALCOTT Smithsonian Misc. Coll. **67.**

Zacanthoides charilla p. 40, *cimon* p. 41, *cnopus* p. 43, **spp. n.**, Middle Cambrian, N. America figs., WALCOTT, t.c.

XIPHOSURA, ETC.

HOLMGREN, 3.—NUKADA, 4.

†EURYPTERIDA.

Eurypterus dumonti **sp. n.** Coal Measures, Belgium, p. 646 figs., STAINIER Q. J. Geol. Soc. **71.**

Sidneyia inexpectans restoration p. 78 fig., BURLING Ottawa Nat. **31.**

PANTOPODA.

I.—TITLES.

Appellöf, A. Zoologische Ergebnisse der schwedischen Expedition nach Spitzbergen 1908 unter Leitung von Prof. G. De Geer. Teil 2 : 5. Die Pycnogoniden des Eisfjords. Stockholm Vet. Ak. Handl. **54** No. 5 1916 (29 pp.) 1 map 6 textfigs. **1**

Bouvier, E. L. Pycnogonides provenant des campagnes scientifiques de S.A.S. le Prince de Monaco (1885–1913). Rés. camp. sci. Monaco **51** 1917 (56, pp.) 4 pls. **2**

Loman, J. C. C. Vitale kleuring by Pantopoden. Helder Tijdschr. Ned. Dierk. Ver. (2) **15** 1917 (xx–xxi). **3**

Loman, J. C. C. Beiträge zur Anatomie und Biologie der Pantopoden. Helder Tijdschr. Ned. Dierk. Ver. **16** 1917 (53–102) pl. iv, text-figs. **4**

II.—SUBJECT INDEX= 2803—2837.

Anatomy, Development, Affinities ; **Loman, 4.**

Intra vitam staining ; **Loman, 3.**

N. Atlantic and Mediterranean ; **Bouvier, 2.**

Arctic Ocean, Spitsbergen ; **Appellöf, 1.**

III.—SYSTEMATIC INDEX = 2831.

Ammothea (*Achelia*) *setulosa* p. 41 figs., Bouvier Rés. camp. sci. Monaco **51.**

Ascorhynchus abyssi var. n. *apicalis* p. 37 fig., Bouvier t.c.

Colossendeis macerrima p. 10, *colossea* p. 13, figs., Bouvier t.c.

Eurycyde hispida, raphiaster, p. 33 figs., Bouvier t.c.

Pallene acus p. 26 fig., Bouvier t.c.

Paranymphon spinosum p. 16 figs., Bouvier t.c.

Phoxichilus spinosus p. 30 fig., Bouvier t.c.

ARACHNIDA

(INCL. TARDIGRADA & PENTASTOMIDA)

CONTENTS (*see* p. 2)

I.—TITLES.

Åhlander, F. E. Svensk Entomologisk och Arachnologisk litteratur år 1913 (jämte tillägg för 1911–1912) Ent. Tidskr. Uppsala **37** 1916 (44–54). **1**

Åhlander, F. E. Svensk Entomologisk och Arachnologisk litteratur år 1914 (Jämte tillägg för 1913). Ent. Tidskr. Uppsala **37** 1916 (241–249). **2**

Åhlander, F. E. Svensk Entomologisk och Arachnologisk litteratur för år 1915 (Jämte äldre tillägg). Ent. Tidskr. Uppsala **38** 1917 (312–320). **3**

Alabaster, A. W. The Hydracarina of South Devon. Plymouth Trans. Field Club **5** 1917 (16–19). **4**

Aragão, H. de B. Ixodidas. Commissão de linhas telegraphicas de Matto Grosso ao Amazonas. Pub. No. **36** Annexo No. 5. Zoologia. Rio de Janeiro 1916 (19 pp.). **5**

Bagnall, R. S. Records of Lancashire and Cheshire Mite-galls (*Eriophyidae*). Lancs. Nat. Darwen **9** 1917 (309–314). **6**

Bagnall, R. S. and **Harrison, J. W. H.** Records of some new British plant-galls, vi. Ninety-nine new British gall-mites (*Eriophyidae*). Ent. Rec. London **29** 1917 (95–101, 126–129). **7**

Bagnall, R. S. and **Harrison, J. W. H.** Talks about plant galls. V. Mite-galls (*Eriophyidae*). The Vasculum Hexham **2** 1917 (116–120) figs. **8**

Banks, N. New Mites, mostly economic. Ent. News Philadelphia **28** 1917 (193–199) 2 pls. **9**

Berland, Jeanne. Adaptation de l'instinct chez une araignée: *Nemoscolus laurae* E. Simon. Arch. Zool. Paris **56** 1917 (Notes et Revue) (134–138) figs. **10**

Berlese, A. Acariens. Deuxième Exped. Antarct. Française (1908–1910). Documents scientifiques 1917 (11 pp.) 1 pl. **11**

Borelli, A. Scorpioni nuovi o poco noti del Messico. Boll. Mus. Zool. Torino **30** No. 703 1915 (7 pp.). **12**

Brittain, W. H. Two apple leaf mites of economic importance. Canad. Entomol. London Can. **49** 1917 (185–189) pl. x. **13**

Buxton, B. H. Notes on the anatomy of Arachnids. The coxal glands of the Arachnids. The ganglia of the Arachnids. J. Morph. Philadelphia **29** 1917 (1–25) 3 pls. **14**

Casteel, D. B. Cytoplasmic inclusions in male germ cells of the fowl tick, *Argas miniatus*, and histogenesis of the spermatozoon. J. Morphol. Philadelphia **28** 1917 (643–666) 8 pls. **15**

Catalán, E. Arañas venenosas (Contribución a su estudio). Rev. chilena Santiago **20** 1916 (58–74) pl. iv. **16**

Chamberlin, R. V. Results of the Yale Peruvian Expedition of 1911. The Arachnida. Cambridge Mass. Bull. Mus. Comp. Zool. Harvard **60** No. 6 1916 (177–299) 25 pls. **17**

Chamberlin, R. V. New spiders of the family Avicularíidae. Cambridge Mass. Bull. Mus. Comp. Zool. Harvard **61** No. 3 1917 (25–75) 5 pls. **18**

Chinalgia, Leopoldo. Revisione del gen. "Hydrozetes" Berl. Redia Firenze **12** 1917 (343–359) figs. **19**

Cockerell, T. D. A. Arthropods in Burmese amber. Amer. J. Sci. New Haven Conn. ser. 4 **44** 1917 (360–368) figs. **20**

Cockerell, T. D. A. Arthropods in Burmese Amber. Psyche Boston Mass. **24** 1917 (40–45) figs. **21**

Crawley, H. Note on the stage of *Piroplasma bigeminum* which occurs in the Cattle Tick *Margaropus annulatus.* J. Parasitol. Urbana Ill. **2** 1915 (87–92) figs. **22**

Criddle, N. Some habits of two burrowing spiders in Manitoba. Ottawa Nat. **31** 1917 (104–107). **23**

Dam, G. van, and **Roberts,** A. Notes on nests of some Trapdoor Spiders and the nest of *Calommata transvaalicus* Hwtt. Pretoria Ann. Transvaal Mus. **5** 1917 (218–233). **24**

Doane, R. W. Notes on mites attacking orchard and field crops in Utah. Science New York N.S. **46** 1917 (p. 192). **25**

Eales, Nellie B. The life history and economy of the Cheese Mites. Ann. applied Biol. Cambridge **4** 1917 (28–35). **26**

Emerton, J. H. Spiders in the Adirondacks. Ent. News Philadelphia Pa. **28** 1917 (59–60). **27**

Emerton, J. H. Recent studies of Canadian spiders. Canad. Entomol. London Can. **49** 1917 (13–16). **28**

Emerton, J. H. New spiders from Canada and the adjoining states. Canad. Entomol. London Can. **49** 1917 (261–272) figs. **29**

Ewing, H. E. A synopsis of the genera of beetle-mites, with special reference to the North American fauna. Ann. Ent. Soc. Amer. Columbus Ohio **10** 1917 (117–132) figs. **30**

Ewing, H. E. New species of economic mites. J. Economic Ent. Concord **10** 1917 (497–501) figs. **31**

Falconer, W. Abnormal spiders. Naturalist London **1917** 1917 (232–233). **32**

Goosmann, F. Ueber ein neues *Microtrombidium* (*M. oudemansi* Gsm.) Zool. Anz. Leipzig **48** 1917 (337–340) figs. **33**

Graybill, H. W. The action of arsenical dips in preventing tick infestation. Parasitol Urbana Ill. **1** 1914 (48–49). **34**

Hansen, H. J. On the Trichobothria ("auditory hairs") in Arachnida, Myriopoda, and Insecta, with a summary of the external sensory organs in Arachnida. Ent. Tidskr. Stockholm **38** 1917 (240–259). **35**

Harrison, J. W. H. *vide* Bagnall, R. S.

Hay, W. P. A new species of Bear-animalcule from the coast of North Carolina. Washington D.C. Smithsonian Inst. Proc. U.S. Nation. Mus. **53** 1917 (251–254) pl. xxiii. **36**

Heinis, F. Tardigraden aus der Umgebung von Triest. Zool. Anz. Leipzig **49** 1917 (94–96) figs. **37**

Herms, W. B. Contribution to the life-history and habits of the spinose ear tick, *Ornithodorus megnini.* J. Economic Ent. Concord **10** 1917 (407–411). **38**

Herms, W. B. The Pajaroello Tick (*Ornithodorus coriaceus* Koch) with special reference to life history and biting habits. J. Parasitol. Urbana Ill. **2** 1916 (137–142) figs. **39**

Herrera, M. Los Alacranes de Mexico Bol. dir. Est. Biol. Mexico **2** 1917 (265–275) 2 pls. **40**

Hewitt, J. Descriptions of new South African Arachnida. London Ann. Natal Mus. **3** 1917 (687–711) pl. xlvii text-figs. **41**

Hewitt, J. Note on the occurrence of a pedal nose in the male of a trapdoor spider (*Stasimopus*). S. Afric. Journ. Sci. Cape Town **13** 1917 (335–341). **42**

Hirst, S. Species of Arachnida and Myriopoda . . . injurious to Man. British Museum (Natural History). Economic Series, No. **6** 1917 (60 pp.) text-figs. **43**

Hirst, S. On some new Mites of the Suborder Prostigmata living on Lizards. Ann. Mag. Nat. Hist. London ser. 8 **19** 1917 (136–143). **44**

Hirst, S. On the occurrence of a Pseudoparasitic Mite (*Cheletiella parasitivorax*, Mégnin) on the Domestic Cat. Ann. Mag. Nat. Hist. London ser. 8 **20** 1917 (132–133) fig. **45**

Hirst, S. Remarks on certain species of the genus *Demodex*, Owen (the *Demodex* of Man, the Horse, Dog, Rat and Mouse). Ann. Mag. Nat. Hist. London ser. 8 **20** 1917 (232–235) pl. ix text-figs. **46**

Hirst, S. On three new Parasitic Acari. Ann. Mag. Nat. Hist. London ser. 8 **20** 1917 (431–434). **47**

Hirst, S. On an apparently undescribed English Saltatorial mite (*Speleorchestes poduroides*, n. sp.) belonging to the family Eupodidae (Prostigmata). J. Zool. Research London **2** 1917 (115–122) figs. **48**

Holmgren, N. Zur vergleichenden Anatomie des Gehirns von Polychaeten, Onychophoren, Xiphosuren, Arachniden, Crustaceen, Myriopoden und Insekten. Vorstudien zu einer Phylogenie der Arthropoden. Stockholm Vet.-Ak. Handl. **56** No. 1 1916 (303 pp.) 12 pls. 54 text-figs. **49**

Hull, J. E. Eyeless migrants. A life episode of some Gamasids. The Vasculum Hexham **3** 1917 (102–110) figs. **50**

Kellogg, V. L. Spider poison. J. Parasitol. Urbana Ill. **1** 1915 (107–112). **51**

Lahille, F. Description d'un nuevo Ixodido Chileno. Rev. chilena Santiago **20** 1916 (107–108). **52**

Lessert, R. de. Cat. Invert. Suisse Fasc. **9** Opilions. Mus. Hist. Nat. Genève 1917 (vi + 80 pp.) figs. **53**

Lessert, R. de. Cat. Invert. Suisse. Fasc. **10** Scorpions. Mus. Hist. Nat. Genève 1917 (11 pp.) figs. **54**

Lundblad, O. Zwei neue *Arrhenurus*-Arten aus Schweden nebst Bemerkungen zur Identitätsfrage von *Hydrovolzia placophora* (Monti) und *Hydrovolzia halacaroides* Sig Thor. Ent. Tidskr. Uppsala **38** 1917 (153–173) text-figs. pls. **55**

McCaffrey, D. The effect of tick bites on man. J. Parasitol. Urbana Ill. **2** 1916 (193–194). **56**

McDonough, F. L. *vide* McGregor, E. A.

McGregor, E. A. Descriptions of seven new species of Red Spiders. Washington D. C. Smithsonian Inst. Proc. U. S. Nation. Mus. **51** 1917 (581–590) pls. ci–cvii. **57**

McGregor, E. A. and **McDonough,** F. L. The Red Spider on Cotton. Bull. U. S. Dept. Agric. Washington **416** 1917 (72 pp.) 8 pls. text-figs. **58**

Miyajima, M. and **Okumura,** T. Honpo naichi, Chosen, Taiwan san akamushi oyobi sono kinji shu no hikaku kenkyu. [Comparative studies on Akamushi and allied species from Japan, Corea and Formosa.] Saikin. Z. Tokyo **1917** (893–908) 3 pls. **59**

Moles, M. L. Another record of a small Whip Scorpion in California. J. Ent. Zool. Claremont Calif. **9** 1917 (1–7) figs. **60**

Moore, Winifred T. Record of two Pseudoscorpions from Claremont-Laguna region. J. Ent. Zool. Claremont Calif. **9** 1917 (26–29) figs. **61**

Müller, A. Eine neue *Zalmoxis*-Art, nebst Beschreibungen der ihr naheverwandten Formen *Zalmoxis austerus* Hirst und *Zalmoxis granulata* (Loman.) Zool. Anz. Leipzig **48** 1917 (251–258) figs. **62**

Müller, A. Ein neuer Opilionide von Neuguinea. Zool. Anz. Leipzig **48** 1917 (299–301) figs. **63**

Müller, A. Einige neue Gonyleptiden. Zool. Anz. Leipzig **49** 1917 (89–94) figs. **64**

Nielsen, E. Redebyggende Smaaedderkopper. *Theridium riparium* og andre Theridier. Contributions to the biology of *Theridium riparium, sisyphium* and *formosum*. København Fra Naturens Vaerksted **5** 1916 (1–21) figg. **65**

Nielsen, E. Korsedderkoppens og andre Hjulspinderes Spind. The web of the cross-spider and some other wheel-spiders. København Fra Naturens Vaerksted **5** 1916 (129–148) figg. **66**

Nisbet, J. Solpugids from the Claremont-Laguna region. J. Ent. Zool. Claremont Calif. **9** 1917 (22–25) figs. **67**

Nonidez, J. F. Pseudoscorpiones de España. Trab. Mus. Nac. Cien. Nat. Madrid Ser. Zool. **32** 1917 (46 pp.) figs. **68**

Okumura, T. *vide* Miyajima, M.

Oudemans, A. C. Acarologische Aanteekeningen. LXIII [Acarologische Bemerkungen. LXIII.] 's Gravenhage Ber. Ned. Ent. Ver. **4** 1917 (391–396). **69**

Paoli, G. Escurzioni Zoologiche del Dott. Enrico Festa nell' Isola di Rodi. XIV. Ixodoidea. Boll. Mus. Zool. Torino **32** No. 719 1917 (3 pp.) figs. **70**

Pawlowsky, E. Sur l'appareil génital mâle. Sur un cas d'anomalie de cet appareil chez *Isometrus maculatus* (Scorpionides, Fam. Buthidae). Paris C. R. soc. biol. **80** 1917 (502–505) figs. **71**

Pawlowsky, E. Opuscula scorpiotomica. 1. Sur l'appareil génital mâle et sur un cas d'anomalie de cet appareil chez *Isometrus maculatus* (fam. Buthidae). [Russ. with Fr. résumé.] Rev. Zool. Russe Moscou **2** 1917 (45–55) figs. **72**

Porat, C. O. von. Spindelnät utspänt i lufthavet medelst sänklod. Ent. Tidskr. Uppsala **38** 1917 (p. 327) text-fig. **73**

Rainbow, W. J. Results of the South Australian Museum Expedition to Strzelecki and Cooper Creeks. September and October, 1916. (*m*) Araneidae. Adelaide Trans. R. Soc. S. Austr. **41** 1917 (482–489) pl. xxxii. **74**

Rainbow, W. J. Arachnida from Macquarie Island. Australasian Antarct. Exped. 1911–1914. Sci. Repts. Ser. C. Zool. and Bot. **5** pt. i. 1917 (1–13) text-figs. **75**

Roberts, A. *vide* Dam, G. van.

Romyn, G. Hydracarinen in Limburg. Heerlen Natuurhistorisch genootschap in Limburg Mededeelingen **1917** (73–77). **76**

Simon, E. Liste des Arachnides recueillis à Salonique pendant l'occupation française (1916) par le sergent Pierre Denier, membre de la Société. Paris Ann. Soc. Ent. **85** 1916 (1917) (273–276). **77**

Soar, C. D. Two new species of Hydracarina or Water-mites. *Dartia harrisi* gen. et sp. nov. and *Eylais Wilsoni* sp. nov. London J. Quek. Microsc. Cl. **13** 1917 (277–282) pls. xx–xxi. **78**

Soar, C. D. The water mites (*Hydracarina*) of Epping Forest. Essex Nat. Stratford Essex **18** 1917 (96–104) figs. **79**

Sørensen, William. Sur la morphologie de l'abdomen des Araignées. (Ed. par Aug. Krogh.) København Vid. Selsk. Overs. **1916** (351–394) 1 plate 5 figg. **80**

Standen, R. Report on the False-scorpions (Chelifers). Lancs. Nat. Darwen **10** 1917 (27–31). **81**

Todd, J. L. Tick paralysis. J. Parasitol Urbana Ill. **1** 1914 (55–64). **82**

Trägårdh, I. Acari. (Acari collected by the Danmark Expedition to the north-east coast of Greenland 1906–08.) København Medd. Grønl. **43** No. 14 1917 (417–426) 5 figg. **83**

Tucker, R. W. E. On some South African *Avicularíidae* (*Arachnida*). Families *Migidae, Ctenizidae, Diplotheleae* and *Dipluridae*. Cape Town Ann. S. Afric. Mus. **17** 1917 (79–138) pl. ix text-figs. **84**

Viets, K. Diagnosen neuer Wassermilben. Zool. Anz. Leipzig **49** 1917 (20–32 33–40) figs. **85**

Walter, C. Ueber die Identität von *Feltria circularis* Piersig und *Feltria kulczynskii* Schechtel mit *Feltria composita* Thor. Zool. Anz. Leipzig **49** 1917 (158–170) figs. **86**

Walter, C. Schweizerische Süsswasserformen der Halacariden. Rev. Suisse Zool. Genève **25** 1917 (411–423) text-figs. **87**

Walter, C. Beitrag zur Kenntnis der Entwicklung bachbewohnender Milben. Basel Verh. Natf. Ges. **28** 1917 Teil 2 (148–164). **88**

Weidman, F. D. *Cytoleichus penrosei*, a new arachnoid parasite found in the diseased lungs of a prairie dog, *Cynomys ludovicianus*. J. Parasitol. Urbana Ill. **3** 1916 (82–89) 2 pls. **89**

Willcocks, F. C. Notes on some injurious and beneficial mites found in Egypt. Bull. Soc. Ent. Egypte Le Caire **1913** 1914 (15–18). **90**

Willcocks, F. C. An Acarine parasite of the Pink Bollworm, *Pediculoides ventricosus*. Bull. Soc. Ent. Egypte Le Caire **1913** 1914 (68–72). **91**

Willem, V. Observations sur la circulation sanguine et la respiration pulmonaire chez les araignées. Haarlem Arch. Néerl. de physiol. **1** 1917 (226–256) fig. **92**

Williamson, W. Water Mites. Scot. Nat. Edinburgh **1917** 1917 (37–47) figs. **93**

Williamson, W. A rare Hydracarid *Lebertia densa*, Koen. Scot. Nat. Edinburgh **1917** 1917 (271–274) figs. **94**

Wood, H. P. The chicken mite: its life history and habits. Washington D. C. Bull. U. S. Dept. Agric. Div. Ent. **553** 1917 (14 pp.) figs. **95**

II.—SUBJECT-INDEX.

N.B.—The number in Clarendon, when not that of a Volume, refers to the list of Titles.

GENERAL, ECONOMICS. 3003

Bibliography.

Sweden; **Åhlander, 1, 2, 3.**

Economics (see also Parasitism).

Acari; **Banks, 9: Willcocks, 90.**

Arach. injurious to man; **Hirst, 43:** Tick-bites; **McCaffrey, 56:** Poisonous spiders; **Catalán, 16:** Effects of poison of *Araneae*; **Kellogg, 51.**

Ear tick in cattle; **Herms, 38:** Tick paralysis; **Todd, 82.**

Ixodidae, *Piroplasma*, **Crawley, 22:** Arsenical dips for *Ixodidae*; **Graybill, 34.**

Chicken Mite (*Dermanyssus*); **Wood, 95.**

Pediculoides (*Acari*) Egypt; **Willcocks, 91.**

Phytophagus *Acari*; **Ewing, 31:** Mites on crops in Utah; **Doane, 25:** *Tetranychus* on Cotton; **McGregor & McDonough, 58:** *Eriophyidae* on Apple; **Brittain, 13.**

Cheese mites; **Eales, 26.**

STRUCTURE. 3007.

General.

Hydrachnidae; **Williamson, 93.**

Special.

Abdomen, *Araneae*; **Sørensen, 80.**

Central Nervous Syst., *Arachnida*; **Buxton, 14:** Brain; **Holmgren, 49.**

Trichobothria and other sense organs, *Arachnida*; **Hansen, 35:** Eyes; **Holmgren, 49.**

Coxal glands, *Pedipalpi*, *Solifugae*, *Palpigradi*; **Buxton, 14.**

Male genital apparatus, *Scorpiones*; **Pawlowsky, 72.**

PHYSIOLOGY. 3011.

Circulation, respiration, *Araneae*; **Willem, 92.**

Olfactory sense, *Stasimopus* (*Avicularid.*); **Hewitt, 42.**

DEVELOPMENT. 3015.

(Breeding Habits, &c., see Ethology.)

Spermatogenesis, *Argas* (*Ixod.*); **Casteel, 15.**

Dev. *Hydrachnida*; **Walter, 88:** Larvae, *Gamasidae*; **Hull, 50.**

ETHOLOGY. 3019.

General.

Habits, *Stasimopus* (*Avicularid.*); **Hewitt, 42:** *Theridiidae*; **Nielsen, 65:** *Lycosidae*; **Criddle, 23:** *Dermanyssus* (*Gamas.*); **Wood, 95.**

Habitats.

Freshwater *Halacaridae*; **Walter, 87.**

Marine *Tardigrada*; **Hay, 36.**

Parasitism and Symbiosis (see also Economics).

On Mammals, *Acari*; **Hirst, 45, 46, 47**: *Ixodidae* **Herms, 38**: **Lahille, 52**: *Cytoleichus* (*Sarcopt.*); **Weidman, 89.**

On Lizards, *Acari*; **Hirst, 44.**

On Insects, *Gamasidae*; **Hull, 50.**

Plant Galls *vide Eriophyidae.*

Miscellaneous.

Webs, *Araneae*; **Nielsen, 66**: *Nemoscolus* (*Argiop.*); **Berland, 10**: Web stretched by a weight; **von Porat, 73.**

Nests, *Avicularíidae*; **van Dam & Roberts, 24.**

VARIATION AND AETIOLOGY

3023.

Abnormal Spiders; **Falconer, 32**: Abnorm. genital system, male *Scorpiones*; **Pawlowsky, 71, 72.**

DISTRIBUTION.

Geographical. 3027.

Europe and Mediterranean Islands. *d*

Europe, *Acari*; **Oudemans, 69.**

Sweden, *Hydrachnidæ*; **Lundblad, 55.**

Germany, *Trombidiidae*; **Goosmann, 33.**

Limburg, *Hydrachnidae*; **Romyn, 76.**

Scotland, *Hydrachnidae*; **Williamson, 93, 94.**

England, *Acari*; **Hirst, 47, 48**: *Hydrachnidae*; **Soar, 78**: N. England, *Gamasidae*; **Hull, 50**: Cumberland, *Araneae*; **Hull,** The Vasculum, Hexham 3 1917 pp. 30–31: *Oribatidae*; **Hull** *t.c.* pp. 62–64: Lancashire and Cheshire, *Eriophyidae*; **Bagnall, 6**: *Pseudoscorpiones*; **Standen, 81**: *Araneae, Opiliones*; Lancs. Nat. Darwen 9 1917 p. 297, 10 1917 pp. 180–182: South Devon, *Hydrachnidae*; **Alabaster, 4**: Epping Forest, *Hydrachnidae*; **Soar, 79.**

Spain, *Pseudoscorpiones*; **Nonidez, 68.**

Switzerland, *Opiliones*; **de Lessert, 53**: *Scorpiones*; **de Lessert, 54**: *Halacaridae*; **Walter, 87.**

Trieste, *Tardigrada*; **Heinis, 37.**

Salonica, *Araneae, Opiliones*; **Simon, 77.**

Rhodes, *Ixodidae*; **Paoli, 70.**

Asia and Malay Archipelago. *e*

Japan, Corea and Formosa, *Leptus* (*Trombid.*); **Miyajima & Okumura, 59.**

Yunnan Fu, *Acari*; **Hirst, 44.**

India and Ceylon, *Avicularíidae*; **Chamberlin, 18**: Sind, *Acari*; **Hirst, 44.**

Malay Peninsula, *Acari*; **Hirst, 44.**

Persia, *Acari*; **Hirst, 44.**

Africa and Madagascar. *f*

South Africa, *Solifugae, Araneae*; **Hewitt, 41**: *Avicularíidae*; **Tucker, 84**: Cape Colony, *Acari*; **Hirst, 44.**

Cameroons, *Hydrachnidae*; **Viets, 85.**

Portuguese East Africa, *Acari*; **Hirst, 44.**

Socotra, *Acari*; **Hirst, 44.**

North America. *g*

Avicularíidae; **Chamberlin, 18**: *Araneae*; **Emerton, 29**: *Oribatidae*; **Ewing, 30**: Canada, *Araneae*; **Emerton, 28.**

United States, *Acari*; **Banks, 9**: **Ewing, 31**: *Trombidiidae*; **McGregor, 57**: *Tetranychus bimaculatus*; **McGregor & McDonough, 58**: Adirondacks, *Araneae*; **Emerton, 27**: Philadelphia, *Sarcoptidae*; **Weidman, 89**: North Carolina (marine), *Tardigrada*; **Hay, 36**: California, *Solifugae*; **Nisbet, 67**: *Pedipalpi*; **Moles, 60**: *Pseudoscorpiones*; **Moore, 61.**

Mexico, *Scorpiones*; **Borelli, 12**; **Herrera, 40.**

Central and South America and W. Indies. *h*

Avicularidae; **Chamberlin, 18.**

Central America and W. Indies, *Acari*; **Banks, 9.**

S. America, *Opiliones*; **Müller, 64**: Panama and Peru, *Scorpiones, Solifugae, Opiliones, Araneae*; **Chamberlin; 17**: Colombia, *Acari*; **Hirst, 44**: Brazil, *Ixodidae*; **Aragão, 5**: Peru, *Trombidiidae*; **McGregor, 57**: Chile, *Ixodidae*; **Lahille, 52.**

Australasia. *i*

New Guinea, *Acari*; **Hirst, 44**: *Opiliones*; **Müller, 62, 63.**

New South Wales, *Acari*; **Hirst, 44.**

S. Australia, *Araneae*; **Rainbow, 74.**

Macquarie Isd., *Araneae*; **Rainbow, 75.**

Arctic. *k*

Greenland, *Acari*; **Trägårdh, 83.**

Antarctic. *o*

Graham Land, &c., *Acari*; **Berlese, 11.**

GEOLOGICAL.

Miocene Amber, Burma, *Pseudoscorpiones*; **Cockerell, 20**: *Cheyletus* (*Tromb.*); **Cockerell, 21.**

III.—SYSTEMATIC. 3031.

N.B.—The number in Clarendon, when not that of a Volume, refers to the list of Titles.

SCORPIONES.

HERRERA **40.**—DE LESSERT **54.**—PAWLOWSKY **71, 72.**

Brachistosternus andinus **sp. n.** Peru p. 180 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **60.**

Centruroides Chiaravigli **sp. n.** Mexico p. 1, BORELLI Bull. Mus. Zool. Torino **30** No. 703.

Tityus footei **sp. n.** Peru p. 178 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **60.**

Vaejovis crassimanus p. 3, *globosus* **sp. n.** p. 4, *intermedius* **sp. n.** p. 6, Mexico, BORELLI Boll. Mus. Zool. Torino **20** No. 703.

PEDIPALPI.

Trithyreus pentapeltis p. 1 figs., MOLES J. Ent. Zool. Claremont Calif. **9.**

PALPIGRADI.

(Vacant.)

ARANEAE.

CATALÁN **16.**—EMERTON **27, 28.**—FALCONER **32.**—KELLOGG **51.**—NIELSEN **66.**—VON PORAT **73.**—SÖRENSEN **80.**—WILLEM **92.**

AVICULARIIDAE.

VAN DAM and ROBERTS **24.**—HEWITT **42.**

Acanthoscurria natalensis Brazil p. 64, *cursor* Brazil p. 65, *fracta* Brazil p. 66, *dubia* loc. ? p. 67, **spp. n.**, figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **61.**

Actinopus xenus S. America p. 29 fig., *princeps* p. 31, **spp. n.**, CHAMBERLIN t.c.

Ancylotrypa pusilla p. 94, *spinosa* p. 96, TUCKER Ann. S. Afric. Mus. **17.**

Aptostichus simus **sp. n.** California p. 36 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **61.**

Brachybothrium pugnax p. 73, *hageni* p. 74, **spp. n.** United States, figs., CHAMBERLIN t.c.

Brachythele keithi p. 204, *incursus* p. 205, **spp. n.**, Peru figs., CHAMBERLIN op. cit. **60.**

Calopelma **gen. n.** p. 43, *brasiliana* **sp. n.** Brazil p. 44 figs., CHAMBERLIN op. cit. **61.**

Cyrtopholis medius p. 37, *portoricae* p. 39, *annectans* p. 40, *pelus* p. 42, **spp. n.**, W. Indies figs., CHAMBERLIN t.c.

Diplothele arcturus **sp. n.** S. Africa p. 118, TUCKER Ann. S. Afric. Mus. **17.**

Diplura monticolens **sp. n.** Peru p. 202 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **60.**

Eurypelma aymara **sp. n.** Peru p. 201, CHAMBERLIN t.c.—*E. regina* Brazil p. 49, *aberrans* Chile p. 51, *latens* Nicaragua p. 52, *hespera* Mexico p. 54, *aureoceps* Florida p. 55, **spp. n.**, figs. CHAMBERLIN op. cit. **61.**

Gorgyrella inermis **sp. n.** S. Africa p. 135, TUCKER Ann. S. Afric. Mus. **17.**

Grammostola chalcothrix Argentina p. 46; *cala* Chile p. 47, **spp. n.**, figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **61.**

Hemirrhagus peruvianus p. 196, *major* p. 198, **spp. n.**, Peru figs., CHAMBERLIN op. cit. **60.**

Hermacha curvipes p, 106. *bicolor* p. 107, *fulvus* **sp. n.** p. 109, *nigra* **sp. n.** p. 110, *nigrispinosus* **sp. n.** p. 112, *purcelli* **sp. n.** p. 114 figs S. Africa, TUCKER Ann. S. Afric. Mus. **17.**

Homostola zebrina pp. 97 and 136, TUCKER t.c.

Idiops pullus p. 88, *palapyi* p. 90, **spp. n.**, *kentanicus* p. 92, figs. S. Africa, TUCKER t.c.

Ischnothele gracilis **sp. n.** S. Africa p. 123 fig., TUCKER t.c.

Lasiodora differens p. 56, *curtior* p. 58, **spp. n.**, Brazil figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **61.**

Lechrictenus **gen. n.** p. 34, *lamprus* **sp. n.** Florida ? p. 35 figs., CHAMBERLIN t.c.

Lepthercus rattrayi **sp. n.** S. Africa p. 699 figs., HEWITT Ann. Natal Mus. **3.**

Melognathus **gen. n.**, *dromeus* **sp. n.** E. Indies p. 70 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **61.**

Moggridgea quercina p. 79, *peringueyi* p. 80, *latus* **sp. n.** p. 81, *terricola* p. 82 fig., S. Africa, TUCKER Ann. S. Afric. Mus. **17.**

Nemesia denieri **sp. n.** Salonica p. 273, SIMON Paris Ann. Soc. Ent. **85.**

Pachylomerus tuobitus **sp. n.** Illinois p. 33 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **61.**

Phormictopus cubensis Cuba p. 59, *nesiotes* Cuba p. 60, *meloderma* W. Indies p. 62, *platus* Florida p. 63, **spp. n.** figs., CHAMBERLIN t.c.

Pionothele straminea p. 117, TUCKER Ann. S. Afric. Mus. **17.**

Poecilotheria bara **sp. n.** Ceylon p. 71, CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **61.**

Pycnothele **gen. n.** p. 26, *perditus* **sp. n.** Brazil p. 27 figs., CHAMBERLIN t.c.

Pycnothelinae subfam. n. p. 25, CHAMBERLIN t.c.

Segregara **gen. n.** (*Ctenizidae*) p. 125, *transvaalensis*, *abrahami*, p. 134, TUCKER Ann. S. Afric. Mus. **17.**

Selenocosmia kulluensis **sp. n.** India p. 68 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **61.**

Spiroctenus cambierae p. 98, *collinus* p. 99, *broomi* **sp. n.** p. 101, *pilosus* **sp. n.** p. 102, *validus* p. 103, *gooldi* p. 104, *purcelli* **sp. n.** p. 105 figs., S. Africa, TUCKER Ann. S. Afric. Mus. **17.**

Stasimopus longipalpis **sp. n.** p. 689, *insculptus* var. n. *peddiensis* p. 690, *spinipes* **sp. n.** p. 692 figs. S. Africa, HEWITT Ann. Natal Mus. **3.**—*S. purcelli* **sp. n.** p. 84 figs., *kentanicus* p. 85 fig., *nanus* **sp. n.** p. 87 S. Africa, TUCKER Ann. S. Afric. Mus. **17.**

Thelechoris australis p. 120 figs., TUCKER t.c.

Tryssothele australis **sp. n.** Chile p. 72 fig., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **61.**

ULOBORIDAE.

Orinomus **gen. n.** p. 206, *lamprus* **sp. n.** Peru p. 207 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **60.**

DICTYNIDAE.

Auximus productus **sp. n.** Peru p. 211 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **60.**

Aymarella **gen. n.** p. 208, *munda* **sp. n.** Peru p. 209 figs, CHAMBERLIN t.c.

Dictyna hesperia **sp. n.** Peru p. 212 fig., CHAMBERLIN t.c.

SICARIIDAE.

Thomisoides terrosus p. 214 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **60.**

DYSDERIDAE.

Ariadna hotchkissi sp. n. Peru p. 216 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard 60.

CAPONIIDAE.

Nops bellula sp. n. Peru p. 217 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard 60.

DRASSIDAE.

Apodrassus gen. n. p. 221, *andinus* sp. n. Peru p. 222 figs., CHAMBERLIN Bull Mus. Comp. Zool. Harvard 60.

Drassodes araucanius sp. n. Peru p. 219 figs., CHAMBERLIN t.c.

Poecilochroa columbiana sp. n. Vancouver Id. p. 269 fig., EMERTON Canad. Entomol 49.

PHOLCIDAE.

Hypsorinus gen. n., *binghamae* sp. n. Peru p. 224 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard 60.

Litoporus aberrans sp. n. Peru p. 226 figs., CHAMBERLIN t.c.

THERIDIIDAE.

NIELSEN 65.

Argyrodes lucmae sp. n. Peru p. 228 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard 60.

Enoplognatha peruviana p. 232, *dubia* p. 233, spp. n., Peru figs., CHAMBERLIN t.c.

Garricola gen. n. *sanctus* sp. n. Peru p. 231 figs., CHAMBERLIN t.c.

Theridion tosum, *leguiai*, spp. n., Peru p. 229 figs., CHAMBERLIN t.c.—*T. absoloides* p. 483, *idiotypum* p. 484, spp. n. S. Australia figs., RAINBOW Trans. R. Soc. S. Austr. 41.

ARGIOPIDAE.

Acacesia peruviana sp. n. Peru p. 244 fig., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard 60.

Anawixia gen. n. p. 257, *atopa* sp. n. Peru p. 258 figs., CHAMBERLIN t.c.

Araeoncus patellatus sp. n. Brit. Columbia p. 262 figs., EMERTON Canad. Entomol. 49.

Aranea orina p. 248, *quechuana* p. 250, *tigana* p. 251, *compsa* p. 252, *plesia* p. 253, *santa* p. 254, *sexta* p. 255, *duocypha*, *calotypa* p. 256, spp. n., Peru and Panama figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard 60.

Diplostyla inornata New York p. 266, *keenii*, *brevipes*, Brit. Columbia p. 267, spp. n., figs., EMERTON Canad. Entomol. 49.

Erigone taibo p. 234, *niwina* p. 235, spp. n., Peru figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard 60.

Eustala andina p. 245, *monticola* p. 246 fig., spp. n., Peru, CHAMBERLIN t.c.

Gea panamensis sp. n. Panama p. 243 figs., CHAMBERLIN t.c.

Gongylidium curvitarsis New York p. 262, *macrochelis* New Brunswick p. 263, *unidentatum* New York p. 264, spp. n. figs., EMERTON Canad. Entomol. 49.

Lophocarenum sculptum sp. n. Brit. Columbia p. 261 figs., EMERTON t.c.

Meta explorans sp. n. Peru p. 242 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard 60.

Micrathena cala sp. n. Peru p. 261 fig., CHAMBERLIN t.c.

Microneta clavata New York, *pallida* Vancouver Id. p. 266, *orcina* Brit. Columbia p. 266, spp. n., figs., EMERTON Canad. Entomol. 49.

Nemoscolus laurae web p. 134 figs., BERLAND Arch. Zool. 56 Notes et Revue.

Oedothorax melacra, *orinus*, spp. n., Peru p. 236 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard 60.

Scoloderus hybus sp. n. Peru p. 260 fig., CHAMBERLIN t.c.

Tetragnatha tincochacae p. 238, *scopus* p. 239, *quechua* p. 240, spp. n., Peru figs., CHAMBERLIN t.c.

Tutaibo gen. n. *debilipes* sp. n. Peru p. 237 figs., CHAMBERLIN t.c.

MIMETIDAE.

Gelanor innominatum sp. n. Peru p. 262 fig., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard 60.

THOMISIDAE.

Philodromus canadensis p. 270, *macrotarsus* p. 271, **spp. n.**, Canada figs., EMERTON Canad. Entomol. **49.**

Xysticus thessalicus **nom. n.** for *X. graecus* C. Koch 1845 non 1838 p. 275, SIMON Paris Ann. Soc. Ent. **85.**

CLUBIONIDAE.

Amaurobioides africanus **sp. n.** S. Africa p. 704 figs., HEWITT Ann. Natal Mus. **3.**

Anyphaena andina p. 268, *apora* p. 270, *poicila* p. 271, **spp. n.**, Peru figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **60.**

Castaneira quechua **sp. n.** Peru p. 273 fig., CHAMBERLIN t.c.

Eusparassus shefteli **sp. n.** Peru p. 264 figs., CHAMBERLIN t.c.

Gayenna monticola **sp. n.** Peru p. 267 fig., CHAMBERLIN t.c.

Horioctenus **gen. n.** p. 265, *lycosoides* **sp. n.** Peru p. 266 figs., CHAMBERLIN t.c.

Isopeda gloriosa **sp. n.** S. Australia p. 485 figs., RAINBOW Trans. R. Soc. S. Austr. **41.**

Quechuella **gen. n.**, *lampra* **sp. n.** Peru p. 274 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **60.**

Trachelopachys bicolor **sp. n.** Peru p. 275 figs., CHAMBERLIN t.c.

AGELENIDAE.

Mynoglenes marrineri p. 6 figs., RAINBOW Austral. Antarct. Exped. **5.**

Myro hamiltoni p. 8 figs., RAINBOW t.c.

PISAURIDAE.

Trechalea monticola **sp. n.** Peru p. 276 fig., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **60.**

Tunabo **gen. n.** *peruvianus* **sp. n.** Peru p. 278 figs., CHAMBERLIN t.c.

LYCOSIDAE.

CRIDDLE **23.**

Arctosa altamontis **sp. n.** Peru p. 289 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **60.**

Lycosa liopus p. 283, *orinus* p. 284, *andina* p. 286, *algina* p. 287, **spp. n.**, Peru figs., CHAMBERLIN t.c.—*L. waitei* p. 487, *celaenica* p. 488, **spp. n.**, S. Australia figs., RAINBOW Trans. R. Soc. S. Austr. **41.**

Orinocosa **gen. n.** p. 290, *aymara* **sp. n.** Peru p. 291 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **60.**

Pardosa metlakatla Brit. Columbia p. 268, *vancouveri* Vancouver Id. p. 269, **spp. n.**, figs., EMERTON Canad. Entomol. **49.**

Porrima harknessi **sp. n.** Peru p. 280 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **60.**

SALTICIDAE.

Chalcoscirtus carbonarius **sp. n.** Canada p. 271 figs., EMERTON Canad. Entomol. **49.**

Dendryphantes andinus, calus, p. 294, *amphibolus* p. 295, **spp. n.**, Peru figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **60.**

Evophrys sima **sp. n.** Peru p. 298 fig., CHAMBERLIN t.c.

Phiale panamae Panama p. 298, *huadquinae* Peru p. 299, **spp. n.**, figs., CHAMBERLIN t.c.

Wala noda **sp. n.** Peru p. 296 fig., CHAMBERLIN t.c.

SOLIFUGAE.

CHAMBERLIN **17.**

Eremobates formicaria, californica p. 22 figs., NISBET J. Ent. Zool. Claremont Calif. **9.**

Hemerotrecha californica p. 22 figs., NISBET t.c.

Hemiblossia idioceras **sp. n.** Kimberley p. 687 figs., HEWITT Ann. Natal Mus. **3.**

PSEUDOSCORPIONES.

STANDEN **81.**

Chelanops pallipes p. 26 figs., MOORE J. Ent. Zool. Claremont Calif. **9.**

Chelifer Ariasi **sp. n.** p. 9, *setiger* p. 14, *iberus* p. 17, *pinicola* **sp. n.** p. 22 figs. Spain, NONIDEZ Pseudoscorp. España.

†*Electrobisium* gen. n. (*Obisiidae*) *acutum* sp. n. Miocene Amber, Burma p. 360 fig., COCKERELL Amer. J. Sci. 44.

Garypus californicus p. 26 fig., MOORE J. Ent. Zool. Claremont Calif. 9.

Obisium Bolivari sp. n. p. 32, *Jeanneli* p. 36, *lubricum* p. 37, *cavernarum* p. 41 figs. Spain, NONIDEZ Pseudoscorp. España.

OPILIONES.

DE LESSERT 53.—SIMON 77.

Gonoleptes enoplus p. 181, *huadquinae* p. 183, *scotius* p. 186, spp. n., Peru, figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard 60.

Liobunum monticola sp. n. Peru p. 194 figs., CHAMBERLIN t.c.

Liopagus gen. n. (*Phalangiidae*) p. 194, *simplex* sp. n. Peru p. 195 figs., CHAMBERLIN t.c.

Nemastoma lugubre subsp. n. *helvetica* Switzerland p. 57 figs., DE LESSERT Cat. Invert. Suisse Opilions.

Pachyloidellus gen. n. (*Pachylinae*) p. 89, *fuscus* sp. n. S. America p. 90, MÜLLER Zool. Anz. 49.

Pachyloides fischeri p. 91, *tuberculatus* p. 92, figs., spp. n., Paraguay, MÜLLER t.c.

Pachylus orinus sp. n. Peru p. 188 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard 60.

Paravonones peruvianus sp. n. Peru p. 191 figs., CHAMBERLIN.

Sitalces bacilliferus sp. n. New Guinea p. 300 figs., MÜLLER Zool. Anz. 48.

Zalmoxis austerus p. 254, *granulata* p. 255, *neoguinensis* sp. n. New Guinea p. 256 figs., MÜLLER t.c.

RICINULEI, ETC.

(Vacant.)

ACARI.

DOANE 25.—TRÄGÅRDH 83.—WILLCOCKS 90.

Poecilophysis kerguelenensis p. 5, RAINBOW Austral. Antarct. Exped. 5.

ORIBATIDAE, ETC.

Arthrochthonius gen. n. type *pallidulus* Koch p. 130, EWING Ann. Ent. Soc. Amer. 10.

Atropocarus gen. n. type *stricula* Koch p. 131, EWING t.c.

Eupelops gen. n. type *uraceus* Koch p. 126, EWING t.c.

Euphthiracarus gen. n. type *flavus* p. 132, fig., EWING t.c.

Ginglymacarus gen. n. type *dasypus* Duges p. 131 fig., EWING t.c.

Gymnonothrus gen. n. type *sylvestris* Nicolet p. 129 fig., EWING t.c.

Halozetes antarctica p. 4, *belgicae* p. 5, figs., BERLESE Acariens 2e Exped. antarct. française.

Heterodamaeus gen. n. type *bicosticus* Koch p. 128, EWING Ann. Ent. Soc. Amer. 10.

Hydrozetes revision p. 343 figs., CHINALGIA Redia 12.

Neogymnobates gen. n. type *multipilosus* p. 126 fig., EWING Ann. Ent. Soc. Amer. 10.

Neoribatula gen. n. type *brevisetosa* p. 128 fig., EWING t.c.

Steganacarus gen. n. type *anomala* Berlese p. 130, EWING t.c.

Tegoribates gen. n. type *subniger* sp. n. p. 127 fig., EWING t.c.

Tropacarus gen. n. type *carinatum* p. 130, EWING t.c.

GAMASIDAE.

Dermanyssus gallinae p. 1 figs., WOOD Bull. U. S. Dept. Agric. Div. Ent. 553.

Gamasellus (*Digamasellus*) *racovitzai* p. 5 figs., BERLESE Acariens 2e Exped. antarct. française.

Gamasus bombianus p. 109, *nidicolens* p. 110, spp. n., in nests of *Bombus* N. England figs., HULL The Vasculum Hexham 3.

Hypoaspis armatus sp. n. California p. 499 fig., EWING J. Econ. Ent. 10.

Iphiopsis obesus sp. n. Florida p. 198 fig., BANKS Ent. News Philadelphia 28.

Spelaeorhynchus latus sp. n. on bat, Canal zone p. 197 figs., BANKS t.c.

IXODIDAE AND ARGASIDAE

ARAGÃO 5.—CASTEEL 15.—CRAWLEY 22.—GRAYBILL 34.—HERMS 38, 39.—MCCAFFREY 56.—TODD 82.

Dermacentor reticulatus p. 2 fig., PAOLI Boll. Mus. Zool. Torino 32 No. 719.

Haemaphysalis flava p. 2, *punctata* p. 3 figs., PAOLI t.c.

Ixodes abrocomae sp. n. on *Abrocoma* Chile p. 107, LAHILLE Rev. chilena Santiago 20.

Ornithodorus coriaceus p. 137 figs., HERMS J. Parasitol. 2.

Spelaeorhynchus see *Gamasidae*.

TROMBIDIIDAE.

MIYAJIMA and OKUMURA 59.—WILLCOCKS 91.

Caligonus mali sp. n. Oregon p. 499 fig., EWING J. Econ. Ent. 10.

Cheletiella parasitivorax p. 132 fig., HIRST Ann. Mag. Nat. Hist. 20.

†*Chryletus burmiticus* sp. n. Miocene amber, Burma p. 41 fig., COCKERELL Psyche 24.

Eutetranychus subgen. n. of *Tetranychus* for *latus* and *banksi* p. 197, BANKS Ent. News Philadelphia 28.

Geckobia clelandi on *Gymnodactylus* N. S. Wales p. 138, *indica* on *Hemidactylus* Sind p. 139, *papuana* on *Gymnodactylus* N. Guinea, *malayana* on *Gymnodactylus* Malay Pen., p. 140, *boulengeri* on *Gehyra* Yunnan Fu, *socotrensis* on *Pristurus* Socotra, p. 141, *australis* on *Lygodactylus* Port. E. Africa p. 142, spp. n., HIRST Ann. Mag. Nat. Hist. 19.

Geckobiella gen. n. near *Pterygosoma* type *texana*, Banks, p. 138, HIRST t.c.

Microtrombidium oudemansi sp. n. Germany p. 337 figs., GOOSMANN Zool. Anz. 48.

Nanorchestes amphibius p. 119 figs., HIRST J. Zool. Research 2.

Notophallus viridis sp. n. United States p. 193 figs., BANKS Ent. News Philadelphia 28.

Pimeliaphilus tenuipes sp. n. on *Gonatodes* Colombia p. 142, HIRST Ann. Mag. Nat. Hist. 19.

Pterygosoma persicus on *Agama* Persia p. 136, *melanus* on *Agama* Cape p. 137, spp. n., HIRST t.c.

Schizotetranychus latitarsus sp. n. California p. 498 fig., EWING J. Econ. Ent. 10.

Speleorchestes poduroides sp. n. Malvern Hills p. 115 figs., HIRST J. Zool. Research 2.

Stereotydaeus (*Tectopenthalodes*) *villosus* p. 8 figs., BERLESE Acariens 2e Exped. antarct. française.

Stigmaeopsis gen. n. near *Tetranychus* p. 195, *celarius* sp. n. Florida p. 196 figs., BANKS Ent. News Philadelphia 28.

Tarsonemus pallidus (?) p. 501 figs., EWING J. Econ. Ent. 10.

Tetranobia gen. n. near *Tetranychus*, *decepta* sp. n. Arizona p. 194 figs., BANKS Ent. News Philadelphia 28.

Tetranychina gen. n. *apicalis* sp. n. Louisiana p. 195 figs., BANKS t.c.

Tetranychus antillarum sp. n. Porto Rico p. 194 figs., BANKS t.c.—*T. uniunguis*, *multidigituli*, spp. n., N. America p. 497 figs., EWING J. Econ. Ent. 10.—*T. peruianus* Peru p. 581, *rusti* Peru p. 582, *monticolus* Oregon p. 584, *oregonensis* Oregon p. 585, *willamettei* Oregon, *ilicis* S. Carolina, p. 586, *macdonoughi* Florida p. 588, spp. n., figs., MCGREGOR Proc. U. S. Nat. Mus. 51.—*T. bimaculatus* p. 1 figs., MCGREGOR & MCDONOUGH Bull. U. S. Dept. Agric. 416.

HYDRACHNIDAE.

ALABASTER 4.—ROMYN 76.—SOAR 79.—WALTER 88.—WILLIAMSON 93.

Arrhenurus subarcticus p. 153, *suecicus* p. 158, spp. n., Sweden, figs., LUNDBLAD Ent. Tidskr. Uppsala 38.—*A. insecutus*, *latifoliatus*, *spinipetiolatus*, spp. n., Kamerun p. 39, VIETS Zool. Anz. 49.

Atractides cristatus, *ventriosus*, p. 22, *koenikei* p. 23, spp. n., *serratipalpis* subsp. n. *bituberosus* p. 22, Kamerun, figs., VIETS t.c.

Aturus (*Subaturus*) *sulcatus* sp. n. Kamerun p. 31 fig., VIETS t.c.

Axonopsis acuminata p. 31, *undulata* p. 33, *rostrata* p. 34, *gibberosa* p. 35, *koenikei* p. 36, spp. n., Kamerun, *hamata* subsp. n. *similis* p. 34, figs., VIETS t.c.

Dartia gen. n. p. 277, *Harrisi* sp. n. Dartmoor p. 278 figs., SOAR J. Quek. Microsc. Cl. 13.

Encentridophorus multiporus sp. n. Kamerun p. 25 fig., VIETS Zool. Anz. 49.

Eylais Wilsoni sp. n. Staines p. 281 figs., SOAR J. Quek. Microsc. Cl. 13.

Feltria spp. p. 158 figs., WALTER Zool. Anz. 49.

Hydrovolzia placophora (= *H. halacaroides*) p. 162, LUNDBLAD Ent. Tidskr. Uppsala 38.

Koenikea tessellata subsp. n. *acuticaudata* p. 28, *peltophora* sp. n. Kamerun p. 29, figs., VIETS Zool. Anz. 49.

Lebertia densa p. 271 figs., WILLIAMSON Scot. Nat. 1917.

Mamersopsides gen. n. (*Anisitsiellinae*) p. 20, *sigthori* sp. n. Kamerun p. 21, VIETS Zool. Anz. 49.

Megapus damköhleri p. 23, *latisetus*, *serratisetus*, p. 24, spp. n., Kamerun, VIETS t.c.

Neumannia papilligera p. 25, *pentagona* p. 26, *marginata*, *subrubra*, p. 27, spp. n., Kamerun, figs., VIETS t.c.

Oxus curvisetus sp. n. Kamerun p. 21, VIETS t.c.

Pionatacinae subfam. n. p. 30, VIETS t.c.

Pionatax gen. n. (*Pionatacinae*) p. 29, *uncipes* sp. n. Kamerun p. 30 fig., VIETS t.c.

Rhinophoracarus gen. n. (*Arrhenurinae*), *praeacutus* sp. n. Kamerun p. 36 figs., VIETS t.c.

Subaturus subg. n. of *Aturus* (*q.v.*) p. 30, VIETS t.c.

Unionicola minuta sp. n. Kamerun p. 25, VIETS t.c.

Wuria gen. n. (*Arrhenurinae*), *falciseta* sp. n. Kamerun p. 38 figs., VIETS t.c.

HALACARIDAE.

Limnohalacarus gen. n. for *Halacarus wackeri* p. 412 figs., WALTER Rev. Suisse Zool. 25.

Lohmanella violacea p. 421 figs., WALTER t.c.

Soldanellonyx gen. n. *chappuisi* p. 414 *parviscutatus* p. 420, spp. n., Switzerland, figs., WALTER t.c.

(N–4840 *n*)

BDELLIDAE.

(Vacant.)

SARCOPTIDAE.

OUDEMANS 69.

Chirodiscoides gen. n. near *Chirodiscus*, *caviae* sp. n. on Guinea-pig, England, p. 431, HIRST Ann. Mag. Nat. Hist. 20.

Cytoleichus hominis sp. n. Uganda, in Man, p. 19 fig., HIRST Arach. Myriop. injurious to Man.—*C. penrosei* sp. n. in *Cynomys*, Philadelphia, p. 82 figs., WEIDMAN J. Parasitol. 3.

TYROGLYPHIDAE.

EALES 26.

Anoetus turcastanae, Turkestan, *spinitarsus*, Süd-Amerika, p. 392, spp. n., OUDEMANS 's Gravenhage Ber. Ned. Ent. Ver. 4.

Chortoglyphus gracilipes sp. n. Florida p. 199 figs., BANKS Ent. News Philadelphia 28.

Monieziella bipunctata sp. n. Oregon p. 501 figs., EWING J. Econ. Ent. 10.

Tortonia fluctuata sp. n. on *Bombus*, Bremen p. 391, OUDEMANS 's Gravenhage Ber. Ned. Ent. Ver. 4.

Tyroglyphus sacchari sp. n. W. Indies p. 198 figs., BANKS Ent. News Philadelphia 28.

Vidia lineata sp. n. on *Megachile*, Bozen p. 391, OUDEMANS 's Gravenhage Ber. Ned. Ent. Ver. 4.

DEMODICIDAE.

Demodex folliculorum, *caninus*, p. 232, *ratti*, *musculi*, p. 233, *equi* p. 235, figs., HIRST Ann. Mag. Nat. Hist. 20.—*D. muscardini* sp. n. on *Muscardinus*, England, p. 433, *erinacei* sp. n. on *Erinaceus*, England, p. 434, HIRST t.c.

ERIOPHYIDAE.

BAGNALL 6.—BAGNALL & HARRISON 7, 8.—BRITTAIN 13.

TARDIGRADA.

Batillipes caudatus sp. n. North Carolina p. 252 figs., HAY Proc. U.S. Nat. Mus. 53.

Echiniscus menzeli sp. n. Triest p. 96 fig., HEINIS Zool. Anz. 49.

PENTASTOMIDA.

(Vacant.)

MYRIOPODA

CONTENTS (*see* p. 3)

TITLES.

Archey, G. The Lithobiomorpha of New Zealand. Wellington Trans. and Proc. N. Zeal. Inst. **49** 1917 (303–318) figs. **1**

Archey, G. The occurrence in New Zealand of *Craterostigmus tasmanianus* Pocock (Chilopoda). Wellington Trans. and Proc. N. Zeal. Inst. **49** 1917 (319–320) figs. **2**

Attems, C. *Graf.* Myriopoden von Neu-Guinea, gesammelt während der Expedition 1903. Nova Guinea. Résultats de l'expédition scientifique néerlandaise à la Nouvelle Guinée en 1903 sous les auspices de Arthur Wichmann. Leide (E. J. Brill) **5** 1917 (567–587) 4 Taf. **3**

Bagnall, R. S. Records of some British Symphyla. Ann. Mag. Nat. Hist. London ser. 8 **20** 1917 (360–362). **4**

Bagnall, R. S. On some Lancashire Myriapods new to the British fauna, with comments upon halophilous species. Lancs. Nat. Darwen **10** 1917 (104–109). **5**

Bagnall, R. S. The Symphyla of Lancashire and Cheshire. Lancs. Nat. Darwen **10** 1917 (110–112). **6**

Birks, S. G. *vide* Brade, Hilda K.

Brade, Hilda K. and **Birks,** S. G. Notes on Myriapoda. V. On *Cylindroiulus* (*Leucoiulus*) *nitidus* (Verhoeff). Ann. Mag. Nat. Hist. London ser. 8 **19** 1917 (417–424) figs. **7**

Brade, Hilda K. and **Brade-Birks,** S. G. Notes on Myriapoda. VI. Report on Chilopoda and Diplopoda, 1916–17. Lancs. Nat. Darwen **10** 1917 (113–122). **8**

Brade-Birks, Hilda K. and **Brade-Birks,** S. G. Notes on Myriapoda. vii. A new member of the order Ascospermophora (*Jacksoneuma bradeae*, gen. et sp. nov.). J. Zool. Research London **2** 1917 (135–149) figs. **9**

Brölemann, H. W. Une monstruosité chez un Myriapode (*Schizophyllum sabulosum* (L.)). Bull. sci. France Belgique **50** 1917 (277–283) figs. **10**

Brölemann, H. W. Les vulves des Polydesmiens. Paris Bull. Soc. ent. **1917** 1917 (60–62). **11**

Brölemann, H. W. Le stylet prostatique des Spirostreptes. Paris Bul. Soc. ent. **1917** 1917 (151–152). **12**

Carl, J. Sur une anomalie dans la segmentation de certains Diplopodes. Arch. Sci. Phys. Genève **36** 1913 (279–280). **12a**

Carl, J. Spirostreptides nouveaux ou peu connus du Muséum de Genève. Rev. Suisse Zool. Genève **25** 1917 (383–409) text-figs. **13**

Chamberlin, Ralph V. The Lithobiid genera *Oabius*, *Kiberbius*, *Paobius*, *Arebius*, *Nothembius*, and *Tigobius*. Cambridge Mass. Bull. Mus. Comp. Zool. Harvard **57** No. 4 1916 (115–201) 10 pls. **14**

Cockerell, T. D. A. Arthropods in Burmese Amber. Psyche Boston Mass. 24 1917 (40–45) figs. **15**

Hansen, H. J. On the Trichobothria ("auditory hairs") in Arachnida, Myriopoda, and Insects, with a summary of the external sensory organs in Arachnida. Ent. Tidskr. Stockholm 38 1917 (240–259). **16**

Hirst, S. Species of Arachnida and Myriopoda . . . injurious to Man. British Museum (Natural History). Economic Series No. 6 1917 (60 pp) text-figs. **17**

Holmgren, N. Zur vergleichenden Anatomie des Gehirns von Polychaeten, Onychophoren, Xiphosuren, Arachniden, Crustaceen, Myriopoden und Insekten. Vorstudien zu einer Phylogenie der Arthropoden. Stockholm Vet.-Ak. Handl. 56 No. 1 1916 (303 pp) 12 pls. 54 textfigs. **18**

Silvestri, F. Materiali per una revisione dei *Diplopoda Oniscomorpha.* II. Specie di *Sphaeroteridae* delle regioni australiana e neozelandese a me note. Portici Boll. Lab. Zool. 12 1917 (61–85) figs. **19**

Silvestri, F. On some Lithobioidea (*Chilopoda*) from India. Rec. Ind. Mus. Calcutta 13 1917 (307–314) figs. **20**

II.—SUBJECT INDEX.

STRUCTURE = 3407.

Brain; Holmgren, 18.

Trichobothria; **Hansen, 16.**

Vulva, *Polydesminae* (*Dipl.*); **Brölemann, 11.**

Prostatic style, *Spirostreptidae* (*Dipl.*); **Brölemann, 12.**

DEVELOPMENT = 3415.

Developmental stages, *Lithobiidae* (*Chilop.*); **Chamberlin, 14.**

ETHOLOGY = 3419.

Myriopoda injurious to Man; **Hirst, 17.**

Halophilous *Myriopoda*; **Bagnall, 5.**

VARIATION AND AETIOLOGY = 3423.

Abnormality, *Diplopoda*; **Carl, 12a.**—Abnormal gonopods, *Schizophyllum* (*Dipl.*); **Brölemann, 10.**

DISTRIBUTION = 3427.

GEOGRAPHICAL.

British Ids., *Symphyla*; **Bagnall, 4**: Lancashire and Cheshire, *Symphyla*; **Bagnall, 6**: *Diplopoda, Chilopoda*; **Brade & Brade-Birks, 8**: Lancashire, *Diplopoda, Chilopoda*; **Bagnall, 5**: *Diplopoda*; **Brade-Birks, 9**: Staffordshire, *Cylindroiulus* (*Dipl.*); **Brade & Birks, 7.**

India, *Lithobioidea* (*Chilop.*); **Silvestri, 20.**

Cochin China, *Diplopoda*; **Carl, 13.**

Africa, *Diplopoda*; **Carl, 13.**

N. America, *Chilopoda*; **Chamberlin, 14.**

Paraguay, *Diplopoda*; **Carl, 13.**

New Guinea, *Myriopoda*; **Attems, 3.**

Australia, Tasmania, New Zealand, *Sphaerotheriidae* (*Dipl.*); **Silvestri, 19.**

New Zealand, Chatham Is., Kermadec Is., *Chilopoda*; **Archey, 1**: New Zealand, *Chilopoda*; **Archey, 2.**

GEOLOGICAL.

Miocene amber, Burma, *Polyxenus*; **Cockerell, 15.**

III.—SYSTEMATIC INDEX = 3431.

Chilopoda.

BAGNALL **5.**—BRADE & BRADE-BIRKS **8.**

Anopsobius neozelanicus p. 316 figs., ARCHEY Trans. N. Zeal. Inst. **49.**

Arebius gen. n. (*Lithobiidae*) p. 171, *obesus* p. 175, *medius* **sp. n.** p. 177, *elysianus* **sp. n.** p. 179, *oregonensis* **sp. n.** p. 181, (*Pagobius*) *kochii* p. 182, *diplonyx* **sp. n.** p. 184, *dolius* **sp. n.** p. 186, N. America, figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **57.**

Craterostigmus tasmanianus p. 319 figs., ARCHEY Trans. N. Zeal. Inst. **49.**

Henicops maculata p. 306 figs., ARCHEY t.c.

Kiberbius **gen. n.** (*Lithobiidae*) p. 153, *ogmopus* **sp. n.** p. 154, *nannus* **sp. n.** p. 157, *remex* p. 159, figs., N. America, CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **57.**

Lamyctes emarginatus p. 308, *neozelanicus* **sp. n.** N. Zealand p. 309, *chathamensis* **sp. n.** Chatham Is. p. 309, *kermadecensis* **sp. n.** Kermadec Is. p. 311 figs., ARCHEY Trans. N. Zeal. Inst. **49.**

Lithobius feae p. 307, var. n. *percalcarata* p. 309, *kempi* **sp. n.** p. 309, (*Archilithobius*) *tactus* **sp. n.** p. 311, *erraticulus* **sp. n.** p. 312, figs., India, SILVESTRI Rec. Ind. Mus. **13.**

Nothembius **gen. n.** (*Lithobiidae*) p. 188, *insulae* p. 190, *nampus* p. 194, *aberrans* p. 196, **spp. n.**, N. America, figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **57.**

Nyctobius **subg. n.** of *Oabius* (*q.v.*) p. 123, CHAMBERLIN t.c.

Oabius **gen. n.** (*Lithobiidae*) p. 121, *pylorus* **sp. n.** p. 125, *fratris* **sp. n.** p. 130, *tiganus* p. 132, *patonius* p. 134, *p.* var. n. *flavus* p. 136, *p.* var. n. *micrus* p. 137, *uleorus* p. 138, *dissimulans* p. 140, *sastianus* p. 144, *tabiphilus* **sp. n.** p. 145, (*Nyctobius*) *decipiens* **sp. n.** p. 149, *ineptus* **sp. n.** p. 151, N. America, figs., CHAMBERLIN t.c.

Pagobius **subg. n.** of *Arebius* (*q.v.*) p. 173, CHAMBERLIN t.c.

Paobius **gen. n.** (*Lithobiidae*) p. 160, *boreus* p. 163, *columbiensis* p. 166, *orophilus* p. 168, *vagrans* p. 169, **spp. n.**, N. America, figs., CHAMBERLIN t.c.

Paralamyctes validus, *dubius*, **spp. n.**, N. Zealand p. 314 figs., ARCHEY Trans. N. Zeal. Inst. **49.**

Tigobius **gen. n.** (*Lithobiidae*) p. 198, *paralus* **sp. n.** N. America p. 200 figs., CHAMBERLIN Bull. Mus. Comp. Zool. Harvard **57.**

Triporobius **gen. n.** (*Henicopidae*) p. 313, *newtoni* **sp. n.** India p. 314, SILVESTRI Rec. Ind. Mus. **13.**

Wailamyctes **gen. n.** near *Lamyctinus* p. 311, *trailli* Stewart I. p. 312, *halli* N. Zealand p. 313, **spp. n.**, figs., ARCHEY Trans. N. Zeal. Inst. **49.**

Symphyla.

BAGNALL **4, 6.**

Pauropoda.

(Vacant.)

Diplopoda

BAGNALL **5.**—BRADE & BRADE-BIRKS **8.**—BRÖLEMANN **11, 12.**—CARL **12a.**

Agastrophus crinitus **sp. n.** New Guinea p. 574 figs., ATTEMS Nova Guinea **5.**

Akamptogonus **gen. n.** (*Strongylosomidae*) p. 571, *sentaniensis* **sp. n.** New Guinea p. 572 figs., ATTEMS t.c.

Cylindroiulus (*Leucoiulus*) *nitidus* p. 417 figs., BRADE & BIRKS Ann. Mag. Nat. Hist. **19.**

Cyliosoma Targionii p. 69, *Froggatti* **sp. n.** N.S. Wales p. 70, *unicolor* p. 71, *Sennae* p. 72, (*Epicyliosoma*) *Sjoestedti* **sp. n.** Queensland p. 73, *Albertisii* p. 74, figs., SILVESTRI Portici Boll. Lab. Zool. **12.**

Dinematocricus petronius p. 580, *strobilus* p. 581, *hermobius* p. 582, *pasimachus* p. 583, **spp. n.**, New Guinea, figs., ATTEMS Nova Guinea **5.**

Doratogonus annulipes **sp. n.** Africa p. 402 figs., CARL Rev. Suisse Zool. **25.**

Epicyliosoma **subg. n.** of *Cyliosoma* (*q.v.*) p. 68, SILVESTRI Portici Boll. Lab. Zool. **12.**

Jacksoneuma **gen. n.** (*Ascospermophora*) p. 135, *bradeae* **sp. n.** Lancashire p. 138 figs., BRADE-BIRKS J. Zool. Research **2.**

Ktenostreptus lankaensis p. 395 figs., CARL Rev. Suisse Zool. **25.**

Orthomorpha acuta **sp. n.**, *orthogona*, New Guinea, p. 570 figs., ATTEMS Nova Guinea **5.**

Platyrhacus margaritatus p. 573, *declivus* **sp. n.** New Guinea p. 574, ATTEMS t.c.

Polyconoceras aurolimbatus **sp. n.** New Guinea p. 579 figs., ATTEMS t.c.

†*Polyxenus burmiticus* **sp. n.** Miocene amber, Burma, p. 40 fig., COCKERELL Psyche **24.**

Poratophilus junodi p. 384, *similis* p. 387, *distinctus* p. 388, **spp. n.** figs., Africa, CARL Rev. Suisse Zool. **25.**

Procyliosoma **gen. n.** near *Cyliosoma* p. 75, *Leae* **sp. n.** Tasmania p. 77, *tasmanicum* **sp. n.** Tasmania p. 78, *leiosoma* p. 79, *tuberculatum* **sp. n.** Stephens Id. p. 80, *Delacyi* p. 82, *striolatum* p. 83, (*Syncyliosoma*) *Aurivillii* **sp. n.** Cape York p. 85, figs., SILVESTRI Boll. Lab. Zool. Portici **12.**

Schizophyllum sabulosum abnormal p. 277 figs., BRÖLEMANN Bull. sci. France Belgique **50.**

Stenostreptus **gen. n.** near *Spirostreptus* p. 405, *hassleri* **sp. n.** Paraguay p. 406 figs., CARL Rev. Suisse Zool. **25.**

Stenurostreptus **gen. n.** (*Harpagophoridae*) p. 397, type *stenorhynchus* p. 398 figs., CARL t.c.

Syncyliosoma **subg. n.** of *Procyliosoma* (*q.v.*) p 76, SILVESTRI Portici Boll. Lab. Zool. **12.**

Thyropygus luneli p. 390, *cuisinieri* **sp. n.** Cochin China p. 392, figs., CARL Rev. Suisse Zool. **25.**

Trigoniulus harpagus p. 576, *andropygus* p. 577, **spp. n.**, figs., New Guinea, ATTEMS Nova Guinea **5.**

PROTOTRACHEATA

I.—TITLES.

Bouvier, E. L. Description de *Paraperipatus stresemanni* de Ceram. Leiden Zool. Med. **3** 1917 (263–273) 5 Fig. **1**

Holmgren, N. Zur vergleichenden Anatomie des Gehirns von Polychaeten, Onychophoren, Xiphosuren, Arachniden, Crustaceen, Myriopoden und Insekten. Vorstudien zu einer Phylogenie der Arthropoden. Stockholm Vet.-Ak. Handl. **56** No 1 1916 (303 pp.) 12 pls. 54 textfigs. **2**

II.—SUBJECT INDEX.

3203-3227.

GENERAL.

Anat. *Paraperipatus*; **Bouvier, 1.**

Brain; **Holmgren, 2.**

DISTRIBUTION.

Ceram, *Paraperipatus*; **Bouvier, 1.**

III.—SYSTEMATIC INDEX.

3231.

Paraperipatus stresemanni Ceram p. 263 figs., Bouvier Leiden Zool. Med. **3.**

XII. INSECTA

ARRANGED BY

D. SHARP

CONTENTS

	PAGE
I. Titles	8
II. Subject Index :—	
General=3503–4803	71
Historical (vacant)	
Biographical	71
Bibliographical	71
Collections, Museums, Institutions	71
Technique, collecting	71
Nomenclature	71
Economic entomology :—	
General	71
Reports	71
(Objects attacked *vide* General and Creatures)	
Creatures attacking	71
Insects and man, human disease	72
Insects and other animals	72
Useful parasites, and predaceous (vacant)	
Bee culture (vacant)	
Silk	72
Miscellaneous Products (vacant)	
Structure: Morphology=3507–4807	
General	72
Of outer parts	72
Nervous system, sense organs	72
Myology	72
Alimentary canal	72
Circulatory organs, Respiratory organs	72
Blood, glands and cells	72
Reproductive organs	72
Structure of eggs (vacant)	

PAGE

Physiology=3511–4811 :—
General; Parthenogenesis *Vide* Development .. 73
Cycles of Generations 73
Sex.. 73
Hermaphroditism 73
Respiration 73
Senses 73
Particular functions 73
Metabolic 73
Colour 73
Environmental 73
Chemical 73
Development=3515–4815 :—
General 73
Regeneration 73
Chromosomes, Cytology.. 73
Oogenesis Spermatogenesis 73
Fertilisation (vacant)
Parthenogenesis 73
Embryology 73
Postembryology, Metamorphosis 73
Cycles of generations 73
Larvae 73
Ethology=3519–4819 :—
General 73
Ant-life 73
Bee-life 74
Wasp-life 74
Termite-life 74
Cavernicolous 74
Aquatic 74
Gregariousness 74
Migration, flight 74
Sound-production (vacant)
Food-habits 74
Parasitic 74
Nests, Habitat 74
Sex-relations 74
Oviposition and parental.. 74
Hibernation 74
Phenology.. 74
Instinct, psychology, tropisms 74
Attitude, movement, sleep (vacant)
Luminosity 74
Resemblance and utility, mimicry 74
Natural history, special cases 74
Pupal habits, cocoons 75
Insects and plants 75
Galls 75
Acclimatisation (vacant)

PAGE

Aetiology; Variation=3523–4823 :—
General 75
Variation 75
Teratology 75
Hybrids and Crosses 75
Heredity 75
Evolution, including phylogeny.. 75

Geographical or faunistic=3527–4827 :—
General 75
Arctic and antarctic 75
Insular (including New Zealand) 75
Palaearctic region :—
Collective 76
Europe collectively (vacant)
North Europe and Siberia 76
British Islands 76
Central and East Europe 79
France 80
South Europe and Mediterranean 80
Caucasus and West and Central Asia 81
Africa 81
Madagascar, etc. 82
Asia (tropical and Eastern) 82
Asiatic Archipelago 83
Australia and Tasmania 84
North America 84
Central America 85
Antilles 86
South America 86

III. Systematic=3631–4831 :—
General 86
Coleoptera=4831 :—
General 87
Cicindelidae 87
Carabidae 87
Paussidae 90
Haliplidae (vacant)
Dytiscidae 90
Gyrinidae 90
Hydrophilidae 90
Staphylinidae 91
Pselaphidae 92
Scydmaenidae 92
Silphidae 92
Platypsyllidae (vacant)
Trichopterygidae 92
Scaphidiidae 93
Histeridae 93

PAGE

Phalacridae (vacant)
Nitidulidae, Helotidae, Monotomidae 94
Trogositidae 94
Colydiidae.. 94
Discolomidae, Rhysodidae (vacant)
Derodontidae, Adimeridae 94
Byturidae 94
Cucujidae 94
Cryptophagidae 95
Lathridiidae (vacant)
Mycetophagidae 95
Dermestidae, ... 95
Byrrhidae 95
Thorictidae (vacant)
Parnidae (vacant)
Heteroceridae 95
Lucanidae 95
Passalidae 95
Scarabaeidae 95
Buprestidae 99
Elateridae 99
Throscidae, Eucnemidae 100
Cebrionidae (vacant)
Rhipidoceridae 100
Dascillidae, Cyphonidae 100
Malacodermidae 100
Cleridae 101
Lymexylonidae 102
Ptinidae 102
Bostrychidae 102
Cioidae 102
Tenebrionidae 102
Monommidae 104
Cistelidae or Alleculidae.. 104
Melandryidae 104
Lagriidae 105
Anthicidae, Pedilidae, Hylophilidae 107
Mordellidae 107
Rhipiphoridae 108
Cantharidae or Meloidae.. 108
Oedemeridae 108
Pythidae 109
Pyrochroidae } (vacant)
Trictenotomidae }
Curculionidae 109
Scolytidae 112
Brenthidae.. 113
Anthribidae 113
Aglycideridae, Proterhinidae 113
Cerambycidae 113

PAGE

Bruchidae 116
Chrysomelidae 116
Erotylidae.. 118
Endomychidae 119
Coccinellidae, Corylophidae 119

Strepsiptera 119

Hymenoptera=4631 :—
General 119
Apidae 120
Diploptera (Vespidae, Eumenidae and Masaridae) .. 122
Fossoria (Sphegidae, etc.) 122
Formicidae 125
Chrysidae 127
Ichneumonidae 128
Braconidae 130
Evaniidae 131
Trigonalidae, Rhopalosomidae 132
Stephanidae 131
Chalcididae (including Mymaridae) 132
Proctotrypidae, Bethylidae 138
Cynipidae 138
Oryssidae, Cephidae, Tenthredinidae, Xyelidae .. 139

Lepidoptera=4431 :—
General 140
Rhopalocera :—
General 140
Papilionidae 141
Pieridae.. 141
Danaidae, Ithomiidae, Acraeidae, Heliconiidae .. 142
Nymphalidae 142
Morphidae and allies 144
Satyridae 143
Erycinidae, etc.. 144
Lycaenidae 144
Hesperiidae 146

Heterocera :—
Castniidae, Sesiidae 148
Sphingidae 150
Bombyces s.l., etc. 150
Noctuidae 159
Geometridae, Epiplemidae, Uraniidae, etc. 163
Pyralidae, Thyrididae 171
Pterophoridae, Orneodidae 177
Tortricidae, Prototheoridae 177
Tineidae s.l. 179

Trichoptera 185

Neuroptera (including Panorpatae) 185

PAGE

Diptera=4231 :—

General 186
Cecidomyiidae 187
Mycetophilidae 187
Chironomidae 187
Culicidae 187
Psychodidae 189
Simuliidae, Bibionidae 189
Blepharoceridae, Orphnephilidae (vacant)
Tipulidae, Rhyphidae and Ptychopteridae, etc. .. 189
Stratiomyidae 191
Tabanidae.. 191
Leptidae 192
Therevidae (vacant)
Asilidae 192
Acroceridae 192
Bombyliidae 192
Nemestrinidae 192
Empidae 192
Dolichopidae 192
Lonchopteridae (vacant)
Phoridae 192
Platypezidae } (vacant)
Pipunculidae }
Syrphidae 193
Conopidae.. 193
Oestridae 193
Muscidae Calyptratae 194
Muscidae Acalyptratae 198
Pupipara 200

Aphaniptera=3631 200

Hemiptera=4031 :—

General 200

Heteroptera :—
Pentatomidae 200
Coreidae, Lygaeidae 201
Pyrrhocoridae 201
Tingitidae 202
Aradidae 202
Phymatidae 202
Gerridae, Hebridae 202
Reduviidae, Nabidae 203
Cimicidae 203
Anthocoridae, Henicocephalidae 203
Capsidae, Miridae 203
Saldidae (vacant)
Hydrocorisae 204

PAGE

Homoptera :—
Cicadidae 204
Fulgoridae 205
Membracidae 208
Cercopidae 208
Jassidae 208
Psyllidae 209
Aphidae 210
Aleurodidae 213
Coccidae 214

Anoplura or Ellipoptera=3631 215

Thysanoptera=3631 216

Psocidae or Psocoptera=3831 216

Mallophaga or Lipoptera=3631 216
Termitidae or Isoptera 217
Embiidae or Embioptera 217
Perlidae or Plecoptera 217

Ephemeridae or Ephemeroptera=3831 218
Odonata or Paraneuroptera 218
Palaeodictyoptera and Fossils of extinct Orders .. 220

Orthoptera=3831 :—
General 221
Forficulidae 221
Blattidae 222
Phasmidae 223
Mantidae 223
Gryllidae 225
Locustidae 225
Acridiidae 225

Aptera 226

Thysanura s.l.=3631 226

Collembola s.l.=3631 226

Protura 227

I.—TITLES.

Abbott, J. F. The variation of *Arctocorisa interrupta* (Say). Washington University Studies St. Louis Mo. **1** 1913 (10–21) pl. iii. [*Heteroptera.*] **1**

Abbott, J. F. Mimicry in the genus *Limenitis* with special reference to the "Poulton hypothesis." St. Louis Mo. Washington Univ. Stud. **1** (Pt. 1) 1914 (203–221) pl. xxxvii ff. 1–2. [*Lepidoptera.*] **2**

Abraham, N. An interesting case of insect mutualism. S. Afric. Journ. Sc. **14** (137–140). **3**

Achard, J. Liste des Hispidae recueillis par M. Favarel dans la région du Haut Chari. Ann. Soc. ent. France **86** 1917 (63–72). (*Coleoptera.*] **4**

Achard, J. Descriptions de deux chrysomélides nouveaux de l'Amérique du Sud. Bull. Soc. Ent. France **1917** 1917 (230). [*Coleoptera.*] **5**

Adair, E. W. Notes sur la ponte et l'éclosion de *Miomantis savignyi* (Sauss.). Bull. Soc. ent. Egypte **1912** 1914 (117–127). [*Orthoptera.*] **6**

Adair, E. W. Notes préliminaires pour servir à l'étude des Mantidae. Bull. Soc. ent. Egypte **6** 1914 (21–36) **7**

Adair, E. W. Notes on the early stages of the post-embryonic development of *Empusa egena* Charp. Bull. Soc. ent. Egypte **7** 1916 (76–80). [*Orthoptera.*] **8**

Adair, E. W. Le développement de la Mante, *Sphodromantis bioculata* Burm. Bull. Soc. ent. Egypte **7** 1916 (90–99). [*Orthoptera.*] **9**

Adair, E. W. and **Adair, E. E.** Le développement de la mante *Ameles aegyptiaca* Werner. Bull. Soc. ent. Egypte **9** 1917 (81–91). [*Orthoptera.*] **10**

Aders, W. M. Insects injurious to man and stock in Zanzibar. Bull. ent. Res. **7** 1917 (391–401). **11**

Adkin, R. *Ocneria dispar* in Britain. Proc. S. London Ent. Soc. **1916–17** 1917 (1–6). [*Lepidoptera.*] **12**

Åhlander, F. E. Svensk entomologisk och arachnologisk litteratur för år 1915 (Jämte äldre tillägg). Ent. Tidskr. Uppsala **38** 1917 (312–320). **13**

Ahlberg, O. Några för Skåne och Halland nya *Coleoptera*, tagua sommaren 1915. Ent. Tidskr. Uppsala **38** 1917 (326). **14**

Ainslie, C. N. Notes on the construction of the cocoon of *Praon.* Ent. News Philadelphia **28** 1917 (364–367). [*Hymenoptera.*] **15**

Ainslie, G. C. Crambid moths and light. J. econ. Ent. Concord **10** 1917 (114–123). [*Lepidoptera.*] **16**

Ainslie, G. G. *vide* Luginbill & Ainslie.

Alexander, C. P. Two new crane-flies from the Philippine islands. Insec. inscit. Washington **5** 1917 (6–8). [*Diptera.*] **17**

Alexander, C. P. A new *Ctenacroscelis.* Insec. inscit. Washington **5** 1917 (21 & 22). [*Diptera.*] **17a**

Alexander, C. P. New nearctic crane-flies. Part II. Canad. Entom. London Can. **49** 1917 (12–30 61–64). [*Diptera*]. **18**

Alexander, C. P. The Crane-flies of South Africa in the South African Museum (*Diptera Tipulidae*). Ann. S. Afric. Mus. **17** 1917 (139–184) pls. x–xiv. **19**

Alfieri, A. Catalogue des Cerambycides de l'Egypte. Bull. Soc. ent. Egypte **9** 1916 (63–76). [*Coleoptera.*] **20**

Allard, H. A. Synchronism and synchronic rhhtym in the behaviour of certain creatures. Amer. Nat. New York **51** 1917 (438–446). [*Orthoptera.*] 21

Alluaud, C. Contributions à l'étude des Carabiques d'Afrique et de Madagascar. XII. Observations sur le genre *Melanodes* Chaud. et description de deux espèces nouvelles. Bull. Soc. ent. France **1916** 1917 (226–229). [*Coleoptera.*] 22

Alluaud, C. Contributions à l'étude des carabiques d'Afrique et de Madagascar. XIII. Descriptions de deux Oodides et d'un *Thyreopterus* nouveaux de l'Afrique tropicale. Bull. Soc. ent. France **1916** 1917 (294–296). [*Coleoptera.*] 23

Alluaud, C. Contributions à l'étude des carabiques d'Afrique et de Madagascar. XIV. Sur le genre *Crossoglossa* Chaudoir et descriptions de deux espèces nouvelles. Bull. Soc. ent. France **1917** 1917 (85–88). [*Coleoptera.*] 24

Alluaud, C. Contributions à l'étude des carabiques d'Afrique et de Madagascar. XV. Descriptions de quatre espèces nouvelles du sud de Madagascar. Bull. Soc. ent. France **1917** 1917 (136–138). [*Coleoptera.*] 25

Alluaud, C. Contributions, etc. . . . xvi. Descriptions des *Anoplogenius* de Madagascar et d'un genre voisin. Bull. Soc. ent. France **1917** 1917 (243-246). [*Coleoptera.*] 26

Alluaud, C. Contributions, &c. . . . xvii. Descriptions de cinq espèces nouvelles de Madagascar. Bull. Soc. ent. France **1917** 1918 (318-321). [*Coleoptera.*] 27

Alluaud, C. Les carabiques de la faune alpine des hautes montagnes de l'Afrique orientale. Ann. Soc. ent. France **86** 1917 (73-116). [*Coleoptera.*] 28

Alm, G. Till kännedomen om de nätspinnande *Trichopter*-larvernas biologi. Ent. Tidskr. Uppsala **38** 1917 (285-297) pl. 29

Alonso, J. M. D. Noticia de lopublicado en 1916 sobre Entomologiá de España y Portugal. Bol. Soc. españ. Madrid **17** 1917 (166-170). 30

Amari, S. Sankyoso no shusei ni tsuite. [On the habits of the parasitic fly of silkworms.] Tokyo, Sangyo Shikenjo Hokoku [Report of the Sericultural Institute] **2** 1917 (251-286). [*Diptera.*] 31

Amari, S. Sanji sanyo sanga ni kiseisuru dani (Pediculoides) ni kwansuru kenkyu. [On *Pediculoides* sp. parasitic to *Bombyx mori*, its pupa and larva.] Tokyo, Sangyo Shikenjo Hokoku [Report of the Sericultural Institute.] **2** 1917 (223-249) 4 pls. [*Lepidoptera*] 32

Ammitzböll, J. Två för Sverige nya arter *Eristalis.* Ent. Tidskr. Uppsala **38** 1917 (104). [*Diptera.*] 33

André, E. Révision des Mutillides de l'Egypte. Mem. Soc. ent. Egypte **1** 2 1910 (1-94] pls. i-iii. [*Hymenoptera.*] 34

Andres, A. Verzeichnis der bis jetzt in Aegypten beobachteten Schmetterlinge. Bull. ent. Soc. Egypte **1912** 1913 (53-114). [*Lepidoptera.*] 35

Andres, A. *L' Eudemis* de la vigne en Egypte (*Eudemis betrana* Schiff). Bull. ent. Soc. Egypte **1912** 1914 (132–135). [*Lepidoptera.*] 36

Andres, A. Sur une liste de *Coléoptères* capturés en 1867 à 1869 par le Dr. O. Schneider à Ramleh près d'Alexandrie. Bull. Soc. ent. Egypte **6** 1914 (39–48). 37

Andrews, A. W. *Coleoptera* collected in North Eastern Nevada by the Walker-Newcomb expedition of the University of Michigan. Univ. Michigan Zool. occ. paper. No. **48** 1917 (1–3). 38

Aoki, K. and **Chigasaki,** Y. Sanji nobyotakakutei no menyekigakuteki kenkyu. [On the immunity of the polyhedral bodies produced in silkworms infested with jaundice.] Tokio, Sangyo Shikenjo Hokuko [Report of the Sericultural Institute] **2** 1917 (413–423). [*Lepidoptera.*] 39

Aoki, K. and **Honda,** S. Sanji iyeki no menyekiteki kenkyu. [On the immunity of the digestive fluid of silkworms.] Tokyo, Sangyo Shikenjo Hokoku [Report of the Sericultural Institute] **2** 1917 (425–483). [*Lepidoptera.*] 40

Arnold, G. A monograph of the Formicidae of South Africa (*Myrmicinae*). Ann. S. Afric. Mus. **14** 1917 (271–402). [*Hymenoptera.*] **41**

Arrow, C. J. The fauna of British India, including Ceylon and Burma. *Coleoptera.* Lamellicornia part ii (Rutelinae, Desmonycinae and Euchirinae. London May 1917 8vo (xiii + 387) 4 pls. **42**

Arrow, G. J. Some systematic notes on melolonthine *Coleoptera.* Ann. Nat. Hist. London **19** 1917 (59–65). **43**

Arrow, G. J. The Khapra beetle (*Trogoderma khapra* sp. n.) an Indian grain pest. Ann. Nat. Hist. London **19** 1917 (481–482). [*Coleoptera.*] **44**

Arrow, G. J. A systematic revision of the African species of the *Coleopterous* family Erotylidae. Ann. Nat. Hist. London **20** 1917 (137–156). **45**

Arrow, G. J. The life history of *Conwentzia psociformis* Curt. Ent. Mo. Mag. London **53** 1917 (254–257). [*Neuroptera.*] **46**

Arrow, G. J. **Marshall,** G. A. K. **Gahan,** C. J. and **Distant,** W. L. Some insects injurious to cacao plants in the Belgian Congo. Bull. ent. Res. London **8** 1917 (111–118). **47**

Atkin, E. E. and **Bacot,** A. The relation between the hatching of the eggs and the development of the larvae of *Stegomyia fasciata* (*Aedes calopus*) and the presence of bacteria and yeasts. Parasitology Cambridge **9** 1917 (482–536). [*Diptera.*] **48**

Atmore, E. A. *vide* Morley and Atmore.

Auriol, H. d'. Des variations de *Parnassius apollo* dans le Jura. Bull. Soc. Lep. Genève **3** 1916 (129–151). [*Lepidoptera.*] **49**

Auriol, H. d'. *Lépidoptères* rares ou nouveaux recueillis dans le Jura. Bull. Soc. Lép. Genève **3** 1916 (152–155). **50**

Aurivillius, C. Results of Dr. E. Mjöberg's Swedish Scientific Expeditions to Australia 1910–1913. 12. *Cerambycidae.* Ark. Zool. Stockholm **10** No. 23 1917 (50) 3 pls. 3 text figs. [*Coleoptera.*] **51**

Auzat, V. Description d'un nouveau *Gnathoncus* de France. Bull. Soc. ent. France **1917** 1917 (184). [*Coleoptera.*] **52**

Auzat, V. Revision des *Gnathoncus.* Bull. Soc. ent. France **1917** 1917 (206–208). [*Coleoptera.*] **53**

Awati, P. R. Studies in flies. iii. Classification of the genus *Musca* and description of the indian species. Ind. J. med. Res. Calcutta **5** 1917 (160–191) pls. xx–xxix. [*Diptera.*] **54**

Back, E. A. and **Pemberton,** C. E. The melon fly in Hawaii. Bull. U.S. Dep. Agric. Ent. Washington **491** 1917 (1–64) 23 pls. [*Diptera.*] **55**

Back, E. A. and **Pemberton,** C. E. The mediterranean fruit fly in Hawaii. Bull. U.S. Dep. Agric. Ent. **536** 1917 (118 pp.) pls. [*Diptera.*] **56**

Bacot, A. A contribution to the bionomics of *Pediculus humanus* (*vestimenti*) and *Pediculus capitis.* Parasitology Cambridge **9** 1917 (228–258). [*Ellipoptera.*] **57**

Bacot, A. Further note dealing with the question of the specific identity of *Pediculus capitis* and *Pediculus humanus* (*vestimenti*). Pr. ent. Soc. London **1917** 1917 (v–vii). [*Ellipoptera*] **58**

Bacot, A. *vide* Atkin and Bacot.

Bagnall, R. S. On a collection of *Thysanoptera* from St. Vincent, with descriptions of four new species. J. Zool. Research London **2** 1917 (21–27). **59**

Bagnall, R. S. Primitive-tails, bristle-tails and spring-tails. i and ii. Vasculum Hexham **3** 1917 (52–55 65–73). [*Aptera.*] **60**

Bagnall, R. S. Lancashire and Cheshire midge-galls (Cecidomyidae). Lancash. Chesh. Nat. **9** 1917 (253–262 282–290). [*Diptera.*] **61**

Bagnall, R. S. *Aylax taraxaci* (Ashm.), a cynipid new to the british fauna, and notes on other gall-wasps. Ent. Mo. Mag. London **53** 1917 (200) [*Hymenoptera.*] **62**

Bagnall, R. S. *Aylax rogenhoferi* (Wachtl.), a cynipid new to the british fauna. Ent. Mo. Mag. London **53** 1917 (232). [*Hymenoptera.*] **63**

Bagnall, R. S. *Phanacis centaureae* Förster, a cynipid new to the british fauna. Ent. Mo. Mag. London **53** 1917 (275). [*Hymenoptera.*] **64**

Bagnall, R. S. Records of some new british plant-galls. v, more Cecidomyid galls. Ent. Rec. London **29** 1917 (12–15). [*Diptera.*] **65**

Bagnall, R. S. and **Harrison,** J. W. H. New and rare British Cecidomyidae. i. Ent. Rec. London **29** 1917 (206–210) and ii (228–230). [*Diptera.*] **66**

Bagnall, R. S. and **Wallace,** H. S. Talks about plant-galls. Vasculum Hexham **1** 1915 (88–93 etc.). **67**

Baker, A. C. Eastern aphids new or little known. part 2. J. econ. Ent. Concord **10** 1917 (420–433). [*Homoptera.*] **68**

Baker, A. C. The correct name for our apple grain *Aphis.* Science New York **46** 1917 (410). [*Homoptera.*] **69**

Baker, A. C. Synopsis of the genus *Saltusaphis.* Canad. Entom. London Can. **49** 1917 (1–9) pls. i–iii. [*Homoptera.*] **70**

Baker, A. C. Some sensory structures in the Aphididae. Canad. Entom. London Can. **49** 1917 (378–384) pls. xvii & xviii. [*Homoptera.*] **71**

Baker, A. C. On the chinese gall. Ent. News Philadelphia **28** 1917 (385–393) pl. xxvi. [*Homoptera.*] **72**

Baker, A. C. A synopsis of the genus *Calaphis.* Washington D.C. Proc. ent. Soc. **18** 1916 (184–189). [*Homoptera.*] **73**

Baker, A. C. *vide* Quaintance and Baker.

Baker, C. F. A philippine *Aphrastobracon.* Philippine J. Sci. D **12** 1917 (213–215). [*Hymenoptera.*] **74**

Baker, C. F. Ichneumonoid parasites of the Philippines. i. Rhogadinae. Philippine J. Sci. D **12** 1917 (281–327). [*Hymenoptera.*] **75**

Baker, C. F. Ichneumonoid parasites of the Philippines. ii. Rhogadinae. ii. The genus *Rhogas.* Philippine J. Sci. D **12** 1917 (383–422). [*Hymenoptera.*] **76**

Balfour, Alice. Flies in house at Whittengehame. Scott. Natural. Edinburgh **1917** 1917 (118). [*Diptera.*] **77**

Ballard, E. *Calocoris angustatus* Leth. Agric. Inst. Pusa Bull **58** 1916 (8 pp.) pl. [*Heteroptera.*] **78**

Banks, N. Notes on some new species of the genus *Dioctria.* Psyche Boston **24** 1917 (117–119). [*Diptera.*] **79**

Banks, N. New fossorial *Hymenoptera.* Bull. Mus. Harvard Coll. Cambridge Mass. **61** 1917 (97–115). **80**

Barber, H. G. Synoptic keys to the Lygaeidae of the United States. Part 1. Psyche Boston **24** 1917 (128–135). [*Heteroptera.*] **81**

Barber, H. S. A new species of weevil injuring orchids. Washington D.C. Proc. ent. Soc. **18** 1916 (177–179) pl. xiii. [*Coleoptera.*] **82**

Barber, M. A. Cockroaches and ants as carriers of the vibrios of Asiatic cholera. Philippine J. Sci. Manila Sect. B Trop. Med. **9** 1914 (1–4). **83**

Barber, M. A. *vide* Walker, E. L.

Barber, M. A. and **Jones,** C. R. A test of *Coccobacillus acridiorum* d'Herelle on locusts in the Philippines. Philippine J. Sci. Manila Sect. B Trop. Med. **10** 1915 (163–176) tables. [*Orthoptera.*] **83a**

Barker, C. R. Comments on Dr. F. A. Dixey's paper on seasonal dimorphism in butterflies and an attempt to explain the irregularities referred to. S. Afric. J. Sci. Pretoria **1** 1917 (99–105). [*Lepidoptera.*] **84**

Barker, C. N. Some remarkable melanic aberrations among the Acraeinae in the Millar collections of Butterflies of the Durban Museum. Ann. Durb. Mus. Durban **1** 1917 (451–457) pls. xxiv–xxv. [*Lepidoptera.*] **85**

Barker, C. N. The varieties of *Papilio dardanus cenea.* Ann. Durb. Mus. **2** Durban (34–38) pl. vii. [*Lepidoptera.*] **86**

Barnes, W. and **McDunnough,** J. H. Contributions to the Natural history of the *Lepidoptera* of North America. **3,** Decatur 1916 (1–261) pls. i–xxxiii; **4,** Additions and corrections 1917 (58 pp.) 10 pls. **87**

Barnes, W. and **McDunnough,** J. Check list of the *Lepidoptera* of boreal America. Decatur 1917. **88**

Barnes, W. and **McDunnough,** J. A new canadian noctuid. Canad. Entom. London Can. **49** 1917 (320). [*Lepidoptera.*] **89**

Barnes, W. and McDunnough, J. Some Pyralid notes. Canad. Entom. London Can. **49** 1917 (371–374). [*Lepidoptera.*] **90**

Barnes, W. and McDunnough, J. New North-american Phycitinae. Canad. Entom. London Can. **49** 1917 (404–406). [*Lepidoptera.*] **91**

Bastin, H. British insects and how to know them. London (129 pp.) 12 pls. **92**

Baumberger, J. P. Hibernation: a periodical phenomenon. Ann. ent. Soc. Amer. **10** 1917 (179–186). **93**

Baumberger, J. P. Solid media for rearing *Drosophila.* Amer. Nat. New York **51** 1917 (447–448). [*Diptera.*] **94**

Baumberger, J. P. The food of *Drosophila melanogaster* Meigen. Proc. Nat. Ac. Washington **3** 1917 (122–126). [*Diptera.*] **95**

Beare, T. H. The collecting of *Coleoptera.* Vasculum Hexham **1** 1915 (75–78) etc. **96**

Beckwith, C. S. *vide* Headlee and Beckwith.

Bedel, L. Nouveau genre et nouvelles espèces d'Erotylidae de l'Afrique équatoriale. Ann. Soc. ent. France **85** 1917 (367–368). [*Coleoptera.*] **97**

Bedel, L. Une deuxième espèce française du genre *Phaenops* Lac. dans les Cevennes de l'Hérault. Bull. Soc. ent. France **1917** 1917 (275–277). [*Coleoptera.*] **98**

Bedel, L. Diagnoses de *Coléoptères* nouveaux du Maroc oriental. Bull. Soc. ent. France **1917** 1918 (362–364). **99**

Beeson, C. F. C. The life-history of *Diapus furtivus* Sampson. Ind. Forest Rec. **6** 1917 (1–29) 2 pls. [*Coleoptera.*] **100**

Bellamy, A. W. Studies of inheritance and evolution in *Orthoptera.* iv. J. Genetics Cambridge **7** 1917 (55–70) pl. iii. **100a**

Bemmelen, J. van. Het kleurenpatroon der *Diptera*-vleugels. [The colour pattern on *Diptera*-wings.] Amsterdam Versl. Wis. Nat. Afd. K. Akad. Wet. **25** 1917 (1287–1303 10 fig.) (Dutch); Amsterdam Proc. Sci. K. Akad. Wet. **19** 1917 (1141–1156) 10 figs. (English). **101**

Benander, P. För vår fauna nya fjärllar. Ent. Tidskr. Uppsala **38** 1917 (102–103). [*Lepidoptera.*] **102**

Bénard, G. Description d'une nouvelle espèce du genre *Trichiorhyssemus.* Bull. Soc. ent. France **1917** 1917 (167). [*Coleoptera.*] **103**

Benedict, R. C. An outline of the life-history of the clothes-moth, *Tineola biselliella.* Science New York **46** 1917 (464–466). [*Lepidoptera.*] **104**

Bengtsson, S. Weitere Beiträge zur Kenntnis der nordischen Eintagsfliegen. Ent. Tidskr. Uppsala **38** 1917 (174–194) [*Ephemeroptera.*] **105**

Benick, L. *Stenus kuennemanni* nov. spec. aus Italien. Ent. Mitt. Berlin **6** 1917 (182). [*Coleoptera.*] **106**

Bergevin, E. de. Description d'un nouveau genre et d'une nouvelle espèce d'Issidae des hauts plateaux algériens. Bull. Soc. ent. France **1917** 1917 (309 312). [*Homoptera.*] **107**

Bergevin, E. de. Description d'une nouvelle espèce d'*Hysteropterum* de la province d'Oran (Algérie). Bull. Soc. ent. France **1917** 1918 (328–330). [*Homoptera.*] **108**

Bergevin, E. de. Description d'une nouvelle espèce d'*Hysteropterum* des hauts plateaux constantinois (Algérie). Bull. Soc. ent. France **1917** 1918 (374–376). [*Homoptera.*] **109**

Bergh, L. P. van den. *Callidryas scylla* L. ♀ 's Gravenhage Tydschr. Ent. **60** 1917 (268–269) 1 taf. [*Lepidoptera.*] **110**

Bergman, A. M. Om renens oestrider. Ent. Tidskr. Uppsala **38** 1917 (1–32 113–146) pls. Skand. Veterin. Tidskr. Uppsala **6** 1916 (309–340) pls.; **7** 1917 (1–34) pls. [*Diptera.*] **111**

Bergroth, E. Notes sur le genre *Carcinochelis* Fieb. et description d'une espèce nouvelle des îles. Philippines. Bull. Soc. ent. France **1917** 1917 (282–284). [*Heteroptera.*] **112**

Berlese, A. Gli insetti. Vol. 2 (fasc. 17–19) Milano **1917** (481–536). **113**

Berlese, A. *Aspidiotiphagus* How. e *Prospaltella* Ashm. Redia Firenze **12** 1917 (1–13). [*Hymenoptera.*] **114**

Berlese, A. *Scutellista gigantea* Berl., n. sp. Redia Firenze **12** 1917 (179). [*Hymenoptera.*] **115**

Berlioz, J. *Coléoptères* Eumolpides recueillis par M. R. Vitalis de Salvaza au Laos et dans le Haut-Tonkin. Ann. Soc. ent. France **86** 1917 (307–316). **116**

Bernard, Ch., **Zeehandelaar,** A. und **Canter Visscher,** W. A. E. A. Helopeltis - bestryding. [*Helopeltis* - Bekämpfung.] Buitenzorg Meded. Proefst. thee **56** 1917 (1–20). [*Heteroptera.*] **117**

Bernhauer, M. Kurzflügler aus dem deutschen Schutzgebiete Kiautschau und China. Arch. Naturges. Berlin **81** 1916 (27–34). [*Coleoptera.*] **117a**

Bernheim, J. L. Swarms of butterflies. Ent. News Philadelphia **28** 1917 (339) pl. xxiv. [*Lepidoptera.*] **118**

Bethune, C. J. S. The insect collections of Canada. i, the collections of the entomological Society of Ontario. Canad. Entom. London Can. **49** 1917 (153–157). **119**

Beutenmuller, W. Descriptions of new Cynipidae. Canad. Entom. London Can. **49** 1917 (345–349). [*Hymenoptera.*] **120**

Bezzi, M. Contributo allo studio della fauna libica. *Heterotropus trotteri.* Ann. Mus. Doria Genova **47** 1916 (17–25). [*Diptera.*] **121**

Bezzi, M. Studies in Phillippine *Diptera.* ii. Philippine J. Sci. D **12** 1917 (107–159) pl. i. **122**

Bezzi, M. Una nuova specie etiopica del gen. *Himantostoma* Loew. Boll. Lab. Portici **1 2** 1917 (86–93). [*Diptera.*] **123**

Bezzi, M. Ulteriori notizie sul gen. *Himantostoma* Loew. Boll. Lab. Portici **12** 1917 (272–274). [*Diptera.*] **124**

Bezzi, M. New ethiopian fruit-flies of the genus *Dacus.* Bull. ent. Res. London **8** 1917 (63–71). [*Diptera.*] **125**

Bird, H. New species and histories in *Papaipema* Sm. No. 10. Canad. Entom. London Can. **49** 1917 (121–128) pl. viii. [*Lepidoptera.*] **126**

Bishopp, F. C. The distribution of the nose-fly and other species of *Gastrophilus* in the United States. Psyche Boston **24** 1917 (182–187). [*Diptera.*] **127**

Blachier, Ch. Espèces ou formes nouvelles de *Lépidoptères* africains appartenant aux genres "*Acraea*" et "*Mylothris.*" Genève Bul. Soc. Lépidopt. **2** 1913 (173–177) pl. xv. **127a**

Blair, K. G. and **Poulton,** E. B. A colour association of *Mylabris* from S. Nigeria. Pr. ent. Soc. Lond. **1916** 1917 (xcix–cx) pl. B. [*Coleoptera.*] **128**

Blaisdell, F. E. Studies in the tenebrionid tribe Eleodiini. No. 2. Ent. News Philadelphia **28** 1917 (221–226). [*Coleoptera.*] **129**

Blaisdell, F. E. and **Reynolds,** L. R. A new *Omus.* Ent. News Philadelphia **28** 1917 (49–55) pl. vi. [*Coleoptera.*] **130**

Blatchley, W. S. On some new or noteworthy *Coleoptera* from the west coast of Florida. Canad. Entom. London Can. **49** 1917 (137–143 236–240 272–279). **131**

Bodkin, G. E. Notes on the Coccidae of British Guiana. Bull. ent. Res. London **8** 1917 (103–109). [*Homoptera.*] **132**

Böving, A. A generic synopsis of the Coccinellid larvae in the United States national museum, with a description of the larva of *Hyperaspis binotata* Say. P. U.S. nat. Mus. Washington **51** No. 2171 1917 (621–650) pls. cxviii–cxxi. [*Coleoptera.*] **133**

Bohigas, M. and **Sanchez,** A. Catàleg dels insectes del Museu pertanyents als ordres, *Paraneuroptera, Ephemeroptera, Plecoptera, Neuroptera, Megaloptera, Raphidioptera, Embioptera, Mecoptera, Psocoptera, Trichoptera.* Annuar. Junta Ci. Nat. Barcelona **2** 1917 (301–326). **134**

Bolivar y Pieltain C. Silfidos cavernicolas de la region de Castro Urdiales (Santander). Bol. Soc. espan. Madrid **17** 1917 (207–211). [*Coleoptera.*] **135**

Bolivar, y Pieltain, C. Descripción de una especie española del género *Rhipidius.* Bol. Soc. españ. Madrid **17** 1917 (249–252). [*Coleoptera.*] **136**

Bolivar y Pieltain, C. Notas sobre carábidos españoles. Bol. Soc. españ. Madrid **17** 1917 (332–335). [*Coleoptera.*] **137**

Bolton, H. On some insects from the british coal measures. Q. J. Geol. Soc. London **72** 1917 (43–62) pls. iii & iv. **138**

Bolton, H. On blattoid and other insect remains from the South Staffordshire coalfield. Proc. Birmingham Nat. hist. Soc. **14** 1917 (100–106) pl. vii. **139**

Bolton, H. The "Mark Stirrup" collection of fossil insects. Mem. Proc. Manchester Soc. **61** 1916 No. 2 (1–24) 5 pls. **140**

Bondroit, J. Notes sur quelques Formicidae de France. Bull. Soc. ent. France **1917** 1917 (174–177). [*Hymenoptera.*] **141**

Bondroit, J. Diagnoses de trois nouveaux *Formica* d'Europe. Bull. Soc. ent. France **1917** 1917 (186–187). [*Hymenoptera.*] **142**

Borchmann, F. Catalogus *Coleopterorum.* Pars 69 Meloidae, Cephaloidae. Berlin **1917** (208pp.). **142a**

Bordage, E. Phénomènes de transformation de tissus larvaires en tissus à réserves observés pendant les métamorphoses des insectes métaboles. Paris C. R. Acad. Sci. **165** 1917 (477–479). **143**

Bordage, E. Phénomènes de transformation des tissus larvaires chez les insectes metaboles. Bull. Soc. ent. France **1917** 1917 (270–272). **144**

Bordas, L. Anatomie des glandes venimeuses des Pimplinae. Bull. Soc. ent. France **1917** 1917 (197–198). [*Hymenoptera.*] **145**

Bordas, L. Sur le régime alimentaire de quelques Vespinae (*Vespa crabro*). Insecta Rennes **7** 1917 (5–7). [*Hymenoptera.*] **146**

Bordas, L. Morphologie et contenu des tubes de Malpighi de quelques Cetoninae. Insecta Rennes **7** 1917 (25–27). [*Coleoptera.*] **147**

Bordas, L. Nouvelles observations sur l'appareil digestif des Cetoninae. Bull. Soc. Zool. France **42** 1917 (7–12). [*Coleoptera.*] **148**

Bordas, L. Observations biologiques et anatomiques (intestin) sur quelques Cetoninae. Paris C. R. Acad. Sci. **164** 1917 (150–153). [*Coleoptera.*] **149**

Bordas, L. Sur le rôle des Ichneumonides dans la lutte contre les parasites des arbres forestiers. Paris C. R. Acad. Sci. **164** (235–238), also (923–925). [*Hymenoptera.*] **150**

Bordas, L. Sur quelques points d'anatomie de la tordeuse du chêne (*Tortrix viridana* L.). Paris C. R. Acad. Sci. **164** 1917 (789–791). [*Lepidoptera.*] **151**

Bordas, L. Ponte du *Rhynchites* coupe-bourgeon (*Rhynchites conicus*) et anatomie de sa larve. Paris C. R. Acad. Sci. **165** 1917 (70–73). [*Coleoptera.*] **152**

Borelli, A. Dermatteri delle isole filippine. Boll. Mus. Torino **30** ? 1915 No. 697 (7 pp.). [*Orthoptera.*] **153**

Borelli, A. Di alcuni Dermatteri della Cina. Boll. Mus. Torino **30** ? 1915 No. 698 (6 pp.). [*Orthoptera.*] **154**

Borelli, A. Dermatteri nuovi o poco noti del Messico. Boll. Mus. Torino **30** ? 1915 No. 699 (4 pp.). [*Orthoptera.*] **155**

Borelli, A. Dermatteri delle isole filippine. Nota ii. Boll. Mus. Torino **30** 1915 No. 705 (7 pp.). [*Orthoptera.*] **156**

Borelli, A. Di una nuova specie del genere *Forficula* Lin. Boll. Mus. Torino **31** 1916 No. 711 (3 pp.). [*Orthoptera.*] **157**

Borelli, A. Dermatteri delle isole filippinae. iii. Boll. Mus. Torino **31** 1916 No. 715 (6 pp.). [*Orthoptera.*] **158**

Borelli, A. Dermatteri delle isole filippinae. Nota iv. Boll. Mus. Torino **32** 1917 No. 721 (4 pp.); Nota v. No. 726 (5 pp.). **159**

Boullet, E. *vide* Mabille and Boullet.

Bourgoin, A. Note rectificative sur *Bombodes vitalisi* Bourgoin et description d'une nouvelle espèce de *Bombodes.* Bull. Soc. ent. France **1916** 1917 (254–255). [*Coleoptera.*] **160**

Bourgoin, A. Diagnoses préliminaires de Cétonides nouveaux recueillis par M. R. Vitalis de Salvaza en Indo-Chine. Bull. Soc. ent. France **1916** 1917 (297–298). [*Coleoptera.*] **161**

Bourgoin, A. Diagnoses préliminaires de Cétonides nouveaux recueillis par M. R. Vitalis de Salvaza en Indo-Chine. 2 note. Bull. Soc. ent. France **1917** 1917 (68–70). [*Coleoptera.*] **162**

Bourgoin, A. Descriptions de deux Trichiini nouveaux de l'Afrique tropicale. Bull. Soc. ent. France **1917** 1917 (117–121). [*Coleoptera.*] **163**

Bourgoin, A. Diagnoses préliminaires de Cetonides nouveaux recueillis par M. R. Vitalis de Salvaza en Indo-Chine; 3 note. Bull. Soc. ent. France **1917** 1917 (230–231). [*Coleoptera.*] **164**

Bourgoin, A. Description du mâle d'*Euchroea spininasuta* Fairm. et de deux autres Cétonides nouveaux de Madagascar. Bull. Soc. ent. France **1917** 1917 (246–249). [*Coleoptera.*] **165**

Bourgoin, A. Description de deux *Diceros* nouveaux. Bull. Soc. ent. France **1917** 1917 (277–279). [*Coleoptera.*] **166**

Bourgoin, A. Trois espèces nouvelles de *Macronota.* Bull. Soc. ent. France **1917** 1918 (321–324). [*Coleoptera.*] **167**

Bourgoin, A. Description d'un genre nouveau et de trois espèces nouvelles de Cétonides de l'Indo-Chine française. Bull. Soc. ent. France **1917** 1918 (365–367). [*Coleoptera.*] **168**

Bouvier, E. L. Les guerres d'insectes. Rev. scient. Paris **1917** (737–741). **169**

Bracken, C. W. The *Diptera* of Devon. Tr. Devonshire Ass. **49** 1917 (341–362). **170**

Brain, C. K. and **Kelly,** A. E. The status of introduced coccids in South Africa in 1917. Bull. ent. Res. London **8** 1917 (181–185). [*Homoptera.*] **171**

Braun, Annette F. Observations on the pupal wings of *Nepticula,* with comparative notes on other genera. Ann. ent. Soc. Amer. Columbus **10** 1917 (233–239) pl. xviii. [*Lepidoptera.*] **172**

Brauns, H. Notes and synonomy of *Hymenoptera* in the collection of the Transvaal Museum. Ann. Transv. Mus. Pretoria **5** 1917 (238–245). **173**

Breemen, M. **van.** Een voorloopig onderzoek betreffende de verschillende soorten van anophelinen, te Soerabaja voorkomende. [Eine vorläufige Untersuchung über die verschiedenen Arten von Anophelinen, welche zu Soerabaja vorkommen.] Batavia Geneesk. Tydschr. Ned.-Indie **57** 1917 (325–329). [*Diptera.*] **173a**

Brèthes, J. Estudio fito-zoologico sobre algunos *Lepidópteros* argentinos productores de agallas. An. Soc. Ci. Argent. **82** 1916 (113–140). **174**

Brèthes, J. Description de trois chalcididae du Chili. Revist. chilena Santiago **20** 1916 (8–10). [*Hymenoptera.*] **175**

Brèthes, J. Description de trois *Hyménoptères* du Chili. Revist. chilena **20** 1916 (26–28). **176**

Brèthes, J. Description d'un nouveau *Coléoptère* du Chili. Revist. chilena **20** 1916 (75–77). **177**

Brèthes, J. Un nouvel Empididae du Chili. Revist. chilena **20** 1916 (79). [*Diptera.*] **178**

Brèthes, J. Description d'un Mimaridae nouveau du Chili. Revist. chilena **21** 1917 (82–84) pl. viii. [*Hymenoptera.*] **179**

Brèthes, J. Quelques *Hyménoptères* du Chili. Revist. chilena **20** 1916 (85–89). **180**

Brèthes, J. Description d'une nouvelle espèce de Thrips du Chili. Revist. chilena **20** 1916 (109–111). [*Thysanoptera.*] **181**

Brèthes, J. Sur quelques *Diptères* de Lima (Perou). An. Zool. aplic. Santiago **1** 1917 (16–18). **182**

Brèthes, J. Quatre *Hyménoptères* parasites du Chili. An. Zool. Aplic. Santiago **1** 1917 (25–29). **183**

Brèthes, J. Un parasite nouveau de *Catocephala rufosignata.* An. Zool. aplic. Santiago **1** 1917 (31). [*Hymenoptera.*] **184**

Brèthes, J. Descripción de dos nuevos *Himenópteros* de Buenos Aires. Physis Buenos Aires **3** 1917 (90). **185**

Brèthes, J. Description d'une nouvelle espèce de moustique de Buenos Aires. Physis Buenos Aires **3** 1917 (226–229). [*Diptera.*] **186**

Brèthes, J. Sur une cécidie de *Physalis viscosa*: description de la cécidie et de la cécidomyie. Physis Buenos Aires **3** 1917 (239–240). [*Diptera.*] **187**

Brèthes, J. Description d'une cécidie et de sa Cécidomyie d'une *Lippia* d'Entre Rios. Physis Buenos Aires **3** 1917 (411–413). [*Diptera.*] **188**

Brèthes, J. Description d'une galle et du papillon qui la produit. Physis Buenos Aires **3** 1917 (449–451).[*Lepidoptera.*] **189**

Breyer, H. G. Notes on expedition to Gazaland, along the Limpopo river, 29th June to 12th August, 1916. Ann. Transvaal Mus. Pretoria **5** 1917 (283–289). [*Lepidoptera.*] **190**

Breyer, H. G. Notes on the expedition to Komatipoort, 16th–28th June, 1916. Ann. Transvaal Mus. Pretoria **5** 1917 (279–282). [*Lepidoptera.*] **191**

Bridges, C. B. A linkage variation in *Drosophila.* J. Exp. Zool. Philadelphia **19** 1915 (1–21) tables. [*Diptera.*] **191a**

Bridwell, J. C. Notes on *Synagris.* P. Hawai. ent. Soc. **3** 1917 (261). [*Hymenoptera.*] **192**

Bridwell, J. C. A note on an *Epyris* and its prey. P. Hawai. ent. Soc. **3** 1917 (262). [*Hymenoptera.*] **193**

Bridwell, J. C. Notes on a peregrine bethylid. P. Hawai. ent. Soc. **3** 1917 (276–279). [*Hymenoptera.*] **194**

Bridwell, J. G. Breeding fruit-fly parasites in the Hawaiian islands. J. Econ. Ent. Concord N.H. **9** 1916 (472–476). [*Hymenoptera.*] **194a**

Brittain, W. H. The green apple-bug in Nova Scotia. Bull. Dep. Agric. Nova Scotia **8** 1917 (56 pp.) 10 pls. [*Heteroptera.*] **195**

Brittain, W. H. and **Good,** C. A. The apple maggot in Nova Scotia. Bull. Dep. Agric. Nova Scotia **9** 1917 (70 pp.) 6 pls. [*Diptera.*] **196**

Brittain, W. H. and **Saunders,** L. G. Notes on the black apple leaf-hopper. Canad. Entom. London Can. **49** 1917 (149–152) pl. ix. [*Homoptera.*] **197**

Britten, H. *Meotica exiliformis* Joy, a good species. Ent. Mo. Mag. London **53** 1915 (55). [*Coleoptera.*] **198**

Britten, H. A new British species of *Ptilium.* Ent. Mo. Mag. London **53** 1917 (126). [*Coleoptera.*] **199**

Britton, W. E. Sixteenth report of the State entomologist of Connecticut for the year 1916. Newhaven Conn. **1917** (65–146) 16 pls. **200**

Brocher, F. Etude expérimentale sur le fonctionnement du vaisseau dorsal et sur la circulation du sang, chez les insectes : ière partie, le *Dyticus marginalis.* Arch. Zool. exp. Paris **56** 1917 (347–358); iie partie, les larves des Odonates (445–490). [*Coleoptera.*] **201**

Broun, T. Descriptions of new genera and species of *Coleoptera.* Bull. N. Zeald. Inst. Wellington **1** part 5 1917 (347–474). **202**

Bruch, C. Metamórfosis de *Taphrocerus elongatus* Gory. An. Soc. Ci. Argent. **82** 1916 (251–256). [*Coleoptera.*] **203**

Bruch, C. Descripción de un nuevo género y de dos nuevas especies de estafilínides mirmecófilos. An. Soc. Ci. Argent. **82** 1916 (257–264). [*Coleoptera.*] **204**

Bruch, C. Costumbres y nidos de hormigas. An. Soc. Argentin. **83** 1917 (302–316); ii. *op. cit.* **84** 1917 (154–168) 3 pls. [*Hymenoptera.*] **205**

Bruch, C. Metamórfosis de *Pachyschelus undularius* (Burm.). Physis Buenos Aires **3** 1917 (30–36) 2 pls. [*Coleoptera.*] **206**

Bruch, C. Insectos mirmecófilos. Physis Buenos Aires **3** 1917 (141–149). **207**

Bruch, C. Observaciones sobre *Hirmoneura exotica* Wiedem. Physis Buenos Aires **3** 1917 (427–430). [*Diptera.*] **208**

Bruch, C. Nuevas capturas de insectos mirmecófilos. Physis Buenos Aires **3** 1917 (458–465). **209**

Brues, C. T. Adult *hymenopterous* parasites attached to the body of their host. Proc. Nation. Ac. Washington **3** 1917 (136–140). [*Hymenoptera.*] **210**

Brues, C. T. Note on the ichneumonid genera *Cyanocryptus* and *Lamprocryptus.* Psyche Boston **24** 1917 (191–195). [*Hymenoptera.*] **211**

Brues, C. T. Note on the adult habits of some *hymenopterous* egg-parasites of *Orthoptera* and *Mantoidea.* Psyche Boston **24** 1917 (195 & 196). 212

Brues, C. T. Three new West-Indian species of the ichneumonid genus *Eiphosoma.* Ent. News Philadelphia **28** 1917 (450–454). [*Hymenoptera.*] 213

Brundin, J. A. Z. Fjärilar från Hälsingland och Medelpad. [Butterflies from Hälsingland and Medelpad in Sweden.] Ent. Tidskr. Uppsala **38** 1917 (209). [*Lepidoptera.*] 214

Buchholz, O. A new species of *Acronycta.* Ent. News Philadelphia **28** 1917 (183). [*Lepidoptera.*] 215

Bugnion, E. Liste des termites indo-malais avec l'indication du nombre des articles des antennes dans les trois castes. Lausanne Bul. Soc. Sci. Nat. **49** 1914 (165–172). [*Isoptera.*] 215a

Bugnion, E. Les yeux des insectes nocturnes. Arch. Sci. Phys. Genève **36** 1913 (C.R.) (572–575). 215b

Bugnion, E. Les yeux des insectes nocturnes. Lausanne Bul. Soc. Sci. Nat. C. R. **49** (xxxiii–xxxvi). 215c

Bugnion, E. L'accroissement des antennes et des cerques de la blatte (*Blatta americana*). C. R. soc. biol. Paris **80** 1917 (317–324). [*Orthoptera.*] 216

Bugnion, E. Les parties buccales de *Nacerda melanura* L. Ann. Soc. ent. France **85** 1917 (327–336). [*Coleoptera.*] 217

Burke, H. E. Flat-headed borers affecting forest trees in the United States. Bull. U. S. Dep. Agric. Ent. Washington **437** 1917 (1–8) 9 pls. [*Coleoptera.*] 218

Burkill, H. J. Further notes on British plant galls. Entomologist London **50** 1917 (82–85). 219

Burr, M. Contributions à la faune entomologique de l'Indo-Chine française. *Dermaptères.* Ann. Soc. ent. France **86** 1917 (57–62). [*Orthoptera.*] 220

Burrows, C. R. R. The British Psychides. Ent. Rec. London **29** 1917 (69–73) pl. iv. [*Lepidoptera.*] 221

Busck, A. Descriptions of new North-American *Microlepidoptera.* Washington D.C. Proc. ent. Soc. **18** 1916 (147–154). 222

Busck, A. The pink bollworm, *Pectinophora gossypiella.* J. Agric. Res. Washington **9** 1917 (343–370) pls. vii–xi. [*Lepidoptera.*] 223

Bussy, L. de. *Lasioderma* in Deli en zyn bestryding. [Lasioderma in Deli und seine Bekämpfung.] Medan Meded. Deli Proefst. **10** 1917 (129–157) pl. [*Coleoptera.*] 224

Butler, E. A. The british species of *Aphelochirus.* Ent. Mo. Mag. London **53** 1917 (180–182). [*Hemiptera.*] 225

Butler, E. A. Two additions to the list of british *Hemiptera.* Ent. Mo. Mag. London **53** 1917 (251–252). 226

Buxton, P. A. On the protocerebrum of *Micropteryx.* Tr. ent. Soc. London **1917** 1917 (112–153) pls. vii–x. [*Lepidoptera.*] 227

Buysson, R. du. Révision des Chrysidides de l'Egypte. Mem. Soc. ent. Egypte Le Caire **1** 1908 (1–100) pls. i–iv. [*Hymenoptera.*] 228

Calvert, Amelia S. and **Calvert,** P. P. A year of Costa Rican natural history. New York Macmillan **1917** (xix+577) maps illustr. 229

Calvert, P. P. Studies on Costaricaan Odonata. viii, a new genus allied to *Cora.* Ent. News Philadelphia **28** 1917 (259–263). [*Paraneuroptera.*] 230

Cameron, A. E. The insect association of a local environmental complex in the district of Holmes chapel, Cheshire. Edinburgh Trans. R. Soc. **52** 1917 (54–78) pls. i & ii. 231

Cameron, A. E. The relation of soil insects to climatic conditions. Agric. Gaz. Canada **4** 1917 (663–668). 232

Cameron, M. On a new group of Staphylinidae. Ent. Mo. Mag. London **53** 1917 (123 & 124). [*Coleoptera.*] 233

Cameron, M. Description of a new genus of Staphylinidae. Ent. Mo. Mag. London **53** 1917 (154 & 155). [*Coleoptera.*] 234

Cameron, M. Description of a new species of *Thinobius.* Ent. Mo. Mag. London **53** 1917 (155). [*Coleoptera.*] 235

Campion, H. On Fabricius's types of Odonata in the British museum (Natural history). Ann. Nat. Hist. London **19** 1917 (441–450). [*Paraneuroptera.*] **236**

Campion, H. On *Chlorolestes umbrata,* Hagen. Entomologist London **50** 1917 (149–152). [*Paraneuroptera.*] **237**

Canter Visscher, W. A. E. A. Helopeltisbestryding. [Helopeltisbekämpfung.] Buitenzorg. Meded. Proefst. Thee **56** 1917 (1–20). [*Heteroptera.*] **237a**

Canter Visscher, W. A. E. A. *vide* Bernard, Ch.

Carl, F. Nouveaux éléments américains dans la faune de Madagascar Arch. Sci. Phys. Genève C. R. **3** 1914 (78). **237b**

Carnochan, F. G. Hololeptinae of the United States. Ann. ent. Soc. Amer. **10** 1917 (367–398) pls. xxviii–xxxvi. [*Coleoptera.*] **238**

Carothers, E. Eleanor. The segregation and recombination of homologous chromosomes as found in two genera of Acrididae. J. Morphol. Philadelphia **28** 1917 (446–493) 14 pls. [*Orthoptera.*] **239**

Carpenter, G. D. H. Notes on southwest Uganda and on late German East Africa west of the Victoria Nyanza. Pr. ent. Soc. London **1916** 1917 (cx–cxxx). **240**

Carpenter, G. H. *Collembola,* zoological results of the Abor expedition 1911–12. Rec. Ind. Mus. Calcutta **8** 1917 (561–568) pls. lv–lvii. **241**

Carpenter, G. H. Injurious insects and other animals observed in Ireland during the years 1914 and 1915. Econ. Proc. R. Dublin Soc. **2** 1916 (221–237). **242**

Cavazza, F. Seconda serie di esperienze intorno all' influenza di alcuni agenti chimici sul *Bombyx mori.* Redia Firenze **12** 1917 (69–108). [*Lepidoptera.*] **243**

Chamberlin, W. J. An annotated list of the scolytid beetles of Oregon. Canad. Entom. London Can. **49** 1917 (321–328 353–356). [*Coleoptera.*] **244**

Chamberlin, W. J. Notes on some Buprestidae of northern California. Ent. News Philadelphia **28** 1917 (129–139 166–169). [*Coleoptera.*] **245**

Champion, G. C. On new and little-known Lagriidae from tropical America. Tr. ent. Soc. London **1917** 1917 (169–267) pls. xii & xiii. [*Coleoptera.*] **246**

Champion, G. C. *Coleoptera* Heteromera (excluding Tenebrionidae) from the Seychelles islands and Aldabra. Ann. Nat. Hist. London **19** 1917 (161–187) pl. vi. **247**

Champion, G. C. New xylophilids from Australia, India and Borneo. Ent. Mo. Mag. London **53** 1917 (1–4). [*Coleoptera.*] **248**

Champion, G. C. Notes on the *Coleoptera* recorded from "resin animé" by the Rev. F. W. Hope. Ent. Mo. Mag. London **53** 1917 (7 & 8 & 244–246). **249**

Champion, G. C. Some *Coleoptera* from northern India. Ent. Mo. Mag. London **53** 1917 (52–55). **250**

Champion, G. C. Notes on tropical american Lagriidae, with descriptions of new species. Ent. Mo. Mag. London **53** 1917 (132–154 188–195 218–222) pl. ii. [*Coleoptera.*] **251**

Champion, G. C. A new barid from a Costa rican bromeliad. Ent. Mo. Mag. London **53** 1917 (223). [*Coleoptera.*] **252**

Champion, G. C. A remarkable new *Scirtes* from Nyasaland. Ent. Mo. Mag. London **53** 1917 (270). [*Coleoptera.*] **253**

Champion, H. G. First impressions of a north indian station in the rains. Ent. Mo. Mag. London **53** 1917 (81–84). **254**

Chapman, T. A. Apterousness in *Lepidoptera.* Trans. London Nat. Hist. Soc. **1916** 1917 (49–76). [*Lepidoptera.*] **255**

Chapman, T. A. The rein-sheath in plebeiid blues: a correction of and addition to paper vi. Tr. ent. Soc. London **1916** 1917 (297–300) pls. lxxv–lxxix. [*Lepidoptera.*] **256**

Chapman, T. A. Resting attitudes in some *Lepidoptera,* examples of recapitulation in habit. Tr. ent. Soc. London **1916** 1917 (301–309) pl. lxxx. **257**

Chapman, T. A. *Micropteryx* entitled to ordinal rank. Order *Zeuglo-ptera.* Tr. ent. Soc. London **1916** 1917 (310–314) pls. lxxxi–xcii. [*Lepido-ptera.*] **258**

Chapman, T. A. The evolution of the habits of the larva of *Lycaena arion,* L. Tr. ent. Soc. London **1916** 1917 (315–321). [*Lepidoptera.*] **259**

Chapman, T. A. An instance of a double pupal skin. Ent. Mo. Mag. London **53** 1917 (196 & 197) pl. iv. [*Lepidoptera.*] **260**

Chapman, T. A. Injury to pupa and malformation of imago. Ent. Mo. Mag. London **53** 1917 (216–218). [*Lepidoptera.*] **261**

Chapman, T. A. The larvae of *Rhadinoceraea micans* Klug and of *Phymatocera aterrima* Klug. Ent. Mo. Mag. London **53** 1917 (224–228) pls. v–vii. [*Hymenoptera.*] **262**

Chapman, T. A. Notes on early stages and life history of the earwig (*Forficula auricularia*). Ent. Rec. London **29** 1917 (25–29 & 177–180) pls. i–iii. [*Orthoptera.*] **263**

Chapman, T. A. The genus *Hesperia.* Ent. Rec. London **29** 1917 (93–95 etc.) pls. vi–xx. [*Lepidoptera.*] **264**

Chapman, T. A. A new european *Lycaena Plebeius argus* (*argyrognomon*) and *aegus* sp. n. [In Oberthür] Et. Lep. comp. **14** 1917 (41–57) with French version (59–76) 20 pls. [*Lepi-doptera.*] **265**

Chatanay, J. Revision des *Zophosis* de l'est de l'Afrique. Ann. Soc. ent. France **85** 1917 (503–624). [*Coleoptera.*] **266**

Chidester, F. E. Sarcophagid larvae from the painted turtle. J. Parasit. Urbana Ill. **2** 1915 (48–49) ff. 1 2. [*Diptera.*] **266a**

Chigasaki, Y. *vide* Aoki, K.

Chittenden, F. H. and **Howard,** N. F. The horse-radish flea-beetle; its life-history and distribution. Bull. U. S. Dep. Agric. Ent. Washington **535** (1–16). [*Coleoptera.*] **267**

Chobaut, A. Description d'un *Baris* nouveau de la faune française, et notes sur quelques Baris de cette même faune. Bull. Soc. ent. France **1917** 1917 (209–210). [*Coleoptera.*] **268**

Chopard, L. Notes préliminaires sur la conformation de l'extrémité abdominale des *Orthoptères.* Arch. Zool. exp. Paris **56** 1917 notes (105–112). **269**

Chopard, L. Notes sur deux espèces du genre *Dolichopoda* Bol. Bull. Soc. ent. France **1917** 1917 (265–268). [*Orthoptera.*] **270**

Chopard, L. Notes sur la biologie de *Dolichopoda palpata* Sulz. Bull. Soc. ent. France **1917** 1917 (287–289). [*Orthoptera.*] **271**

Chopard, L. Contribution à la faune des *Orthoptères* de France (2e note). Bull. Soc. ent. France **1917** 1918 (342–344). **272**

Chrétien, P. Contribution à la connaissance des *Lépidoptères* du nord de l'Afrique. Notes biologiques et critiques. Ann. Soc. ent. France **85** 1917 (369–503). **273**

Christeller, E. Die Missbildungen der Schmetterlinge und Versuche zu ihrer künstlichen Erzeugung. Ent. Mitt. Berlin **6** 1917 (1–32 97–128 193–223) pls. i–iv. [*Lepidoptera.*] **274**

Christy, C. Tsetse flies and fly-belts. Ann. trop. Med. Liverpool **11** 1917 (279–282). [*Diptera.*] **275**

Chrystal, R. N. The western cedar borer: *Trachykele* sp. Agric. Gaz. Canada **4** 1917 (946–949). [*Coleoptera.*] **276**

Chubb, E. C. Note on the new Zululand tsetse fly, *Glossina brandoni* Chubb; and a record of the butterfly *Danais petiverana* in Natal. Ann. Durban Mus. 1918 (252 & 253). **277**

Citroen, S. Anophelinensoorten te Soerabaja. [Anopheliden-Arten zu Soerabaja.] Batavia Geneesk. Tydschr. Ned. Ind. **57** 1917 (763–766). [*Diptera.*] **278**

Clainpanain, J. Note sur une sorte de phénomène de mimétisme par adoption de la couleur des objets environnants, dans la chrysalide du papillon *Danais chrysippus.* Bull. Soc. ent. Egypte **9** 1916 (58–61). [*Lepidoptera.*] **279**

Clainpanain, J. Notes sur certains *Coléoptères* xylophages d'Egypte et leurs abondance à certaines époques. Bull. Soc. ent. Egypte **10** 1917 (72–77). **280**

Clavareau, H. Description d'une *Sagra* nouvelle du Congo belge. Rev. zool. afric. Bruxelles **4** 1916 (269). [*Coleoptera.*] **281**

Clemens, W. A. Rearing experiments and ecology of Georgian bay Ephemeridea. Contr. Canad. Biol. **1915** (113–128) pls. xv xvi and (131–143) pls. xvii & xviii. [*Ephemeroptera.*] **282**

Clemens, W. A. An ecological study of the mayfly *Chirotenetes.* Univ. Toronto Stud. Biol. **17** 1917 (43 pp.) 5 pls. **283**

Closs, A. Einige neue Sphingiden. Ent. Mitt. Berlin **6** 1917 (33–34). [*Lepidoptera.*] **284**

Closs, A. Ueber einige Heteroceren. Ent. Mitt. Berlin **6** 1917 (129–135) pl. v. [*Lepidoptera.*] **285**

Clutterbuck, C. G. Notes on the codling moth (*Carpocapsa pomonella* Linn.). Proc. Cotteswold Field Club **19** 1915 (71–75). [*Lepidoptera.*] **286**

Cockayne, E. A. The condition of the scales in the leaden males of *Agriades thetis,* Rott. and in other Lycaenids. Tr. ent. Soc. London **1917** 1917 (165–168) pl. xi. [*Lepidoptera.*] **287**

Cockayne, E. A. Gynandromorphous *Lepidoptera.* Tr. ent. Soc. London **1916** 1917 (322–335) pls. xciii–civ. **288**

Cockayne, E. A. The relation between the secondary sexual characters and the gonads and accessory sexual glands in insects. Tr. ent. Soc. London **1916** 1917 (336–342). **289**

Cockayne, E. A. An intersex of *Amorpha populi.* Tr. ent. Soc. London **1916** 1917 (343 & 344). [*Lepidoptera.*] **290**

Cockerell, T. D. A. Report on a collection of south african bees chiefly from Natal. Ann. Durban Mus. **1** 1916 (188–216). [*Hymenoptera.*] **291**

Cockerell, T. D. A. Arthropods in Burmese amber. Amer. J. Sci. New Haven **44** 1917 (360–368). **292**

Cockerell, T. D. A. A fossil tsetse fly and other *Diptera* from Florissant, Colorado. Proc. biol. Soc. Washington **30** 1917 (19–21). **293**

Cockerell, T. D. A. Descriptions of fossil insects. Proc. biol. Soc. Washington **30** 1917 (79–82). **294**

Cockerell, T. D. A. Fossil insects. Ann. ent. Soc. Amer. Columbus **10** 1917 (1–22). **295**

Cockerell, T. D. A. Insects in burmese amber. Ann. Amer. ent. Soc. **10** 1917 (323–329). **296**

Cockerell, T. D. A. Arthropods in burmese amber. Psyche Boston **24** 1917 (40–44). **297**

Cockerell, T. D. A. New social bees. Psyche Boston **24** 1917 (120–128). [*Hymenoptera.*] **298**

Cockerell, T. D. A. The fauna of Boulder county, Colorado. iii & iv. Bull. Univ. Colorado **17** 1917 (5–25). **299**

Cockerell, T. D. A. The carpenter bees of the Philippine Islands. Philippine J. Sci. D **12** 1917 (345–349) [*Hymenoptera.*] **300**

Cockerell, T. D. A. Some Euglossine bees. Canad. Entom. London Canad. **49** 1917 (144–146). [*Hymenoptera.*] **301**

Cockerell, T. D. A. Some neotropical megachilid bees. Canad. Entom. London Can. **49** 1917 (252–254). [*Hymenoptera.*] **302**

Cockerell, T. D. A. Descriptions and records of bees, lxxiv. Ann. Nat. Hist. London **19** 1917 (282–290). [*Hymenoptera.*] **303**

Cockerell, T. D. A. Descriptions and records of bees, lxxv. Ann. Nat. Hist. London **19** 1917 (473–481). [*Hymenoptera.*] **304**

Cockerell, T. D. A. Descriptions and records of bees, lxxvi. Ann. Nat. Hist. London **20** 1917 (235–241). [*Hymenoptera.*] **305**

Cockerell, T. D. A. Descriptions and records of bees, lxxvii. Ann. Nat. Hist. London **20** 1917 (298–304). [*Hymenoptera.*] **306**

Cockerell, T. D. A. Descriptions and records of bees, lxxviii. Ann. Nat. Hist. London **20** 1917 (436–441). [*Hymenoptera.*] **307**

Cockerell, T. D. A. Some Japanese bees. Entomologist London **50** 1917 (85–86). [*Hymenoptera.*] **308**

Cockerell, T. D. A. Two new humble bees from China. Entomologist London **50** 1917 (265–266). [*Hymenoptera.*] **309**

Cockerell, T. D. A. New records of bees from Natal. Ann. Durb. Mus. Durban **1** 1917 (460–468). [*Hymenoptera.*] **310**

Cockerell, T. D. A. New records of Natal bees (Second Contribution). Ann Durb. Mus. Durban **2** 1917 (39–46). [*Hymenoptera.*] **311**

Cockerell, T. D. A. New tertiary insects. P.U.S. Nat. Mus. Washington **52** No. 2181 (373–384). pl. xxxi. **312**

Cockerell, T. D. A. Some fossil insects from Florissant, Colorado. P.U.S. Nat. Mus. Washington **53** No. 2210 1917 (389–392). **313**

Cockerell, T. D. A. Entomology at the United States National Museum. Ent. News Philadelphia **28** 1917 (55–59). **314**

Cockerell, T. D. A. New bees from Costa Rica. Ent. News Philadelphia **28** 1917 (200). [*Hymenoptera.*] **315**

Cockerell, T. D. A. Some bees of the genus *Psaenythia.* Ent. News Philadelphia **28** 1917 (302) [*Hymenoptera.*] **316**

Cockerell, T. D. A. A second *Colletes* with spotted wings. Ent. News Philadelphia **28** 1917 (363). [*Hymenoptera.*] **317**

Cockerell, Wilmatte P. Collecting bees in southern Texas. J. N. York ent. Soc. **25** 1917 (187–193). [*Hymenoptera.*] **318**

Cole, A. C. and **Imms,** A. D. Report on an infestation of larvae of the antler moth (*Charaeas graminis* L.) in the Peak district. J. Board Agrie. London **24** 1917 (514–522). [*Lepidoptera.*] **319**

Cole, F. R. Notes on Osten Sacken's group "*Poecilanthrax,*" with descriptions of new species. J. N. York ent. Soc. **25** (67–80) pls. iii–vii. [*Diptera.*] **320**

Collin, J. E. Description of a new species of *Phaonia.* Parasitol. Cambridge **9** 1917 (441–442). [*Diptera.*] **321**

Combs, A. F. Notes on a collection of Odonata from Schoolcraft county, Michigan. Univ. Michigan Zool. occ. pap. **41** 1917 (1–8). [*Paraneuroptera.*] **322**

Cooley, R. A. The spinach carrion beetle *Silpha bituberosa* Lec. J. Econ. Ent. Concord **10** 1917 (94–102) pl. v. [*Coleoptera.*] **323**

Cornwall, J. W. and **Menon,** T. K. On the possibility of the transmission of plague by bed-bugs. Ind. J. med. Res. Calcutta **5** 1917 (137–159.) *Heeeroptera.*] **324**

Cory, E. N. The columbine leafminer. J. Econ. Ent. Concord **9** 1916 (419–424) pl. 31. **324a**

Courvoisier, L. Ueber Nebenformen, Rassen und Zwischenformen bei Lycaeniden. Verh. Ges. Basel **28** 1917 (264–293). [*Lepidoptera.*] **325**

Coutant, A. F. The habits, life-history and structure of a blood-sucking muscid larva (*Protocalliphora azurea*). J. Parasitol. Urbana **1** 1915 (135–150). [*Diptera.*] **325a**

Coward, T. A. *vide* Standen and Coward.

Craighead, F. C. The determination of the abdominal and thoracic areas of the cerambycid larvae as based on a study of the muscles. Washington D.C. Proc. ent. Soc. **18** 1916 (129–146) pls. vi–ix. [*Coleoptera.*] **326**

Crampton, G. C. The thoracic sclerites and the systematic position of *Grylloblatta campodeiformis* Walker, a remarkable annectent. "*Orthopteroid*" insect. Ent. News Philadelphia **26** 1915 (337–350) pl. xiii. **326A**

Crampton, G. C. A phylogenetic study of the terminal abdominal segments and appendages in some female apterygotan and lower pterygotan insects. J. N. York ent. Soc. **25** 1917 (225–237) pls. xvi and xvii. **327**

Crampton, G. C. A phylogenetic study of the lateral head, neck and prothoracic regions in some apterygota and lower pterygota. Ent. News Philadelphia **28** 1917 (398–412) pl. xxvii. **328**

Crampton, G. C. A phylogenetic study of the larval and adult head in *Neuroptera, Mecoptera, Diptera* and *Trichoptera.* Ann. ent. Soc. Amer. **10** 1917 (337–344). **329**

Crampton, G. C. The nature of the veracervix or neck region in insects. Ann. ent. Soc. Amer. Columbus **10** 1917 (187–197). **330**

Crampton, G. C. A comparison of the antennae of the Grylloblattidae and Embiidae to demonstrate the relationship of these two groups of insects. Canad. Entom. London Can. **49** 1917 (213–217) **331**

Crawford, D. L. Philippine and Asiatic Psyllidae. Philippine J. Sci. D **12** 1917 (163–174) pl. [*Homoptera.*] **332**

Crawley, W. C. Ants and aphides in West Somerset. Proc. Somerset Nat. Hist. Soc. **62** 1917 (148–163). **333**

Cresson, E. T. Descriptions of new genera and species of the *Dipterous* family *Ephydridae*, iv. Ent. News Philadelphia **18** 1917 (340–341). **334**

Criddle, R. Precipitation in relation to insect prevalence and distribution. Canad. Entom. London Can. **49** 1917 (77–80). **335**

Criddle, R. Further observations upon the habits of the western wheat stem sawfly in Manitoba and Saskatchewan. Agric. Gaz. Canada Ottawa **4** 1917 (176–177). [*Hymenoptera.*] **336**

Cros, A. Forme des ongles des larves primaires des Meloidae et valeur du terme "triongulin." Ann. Soc. ent. France **86** 1917 (159–164). [*Coleoptera.*] **337**

Crosby, C. R. and **Leonard,** M. D. An egg parasite of the sumac flea-beetle. Ent. News Philadelphia **28** 1917 (368). [*Hymenoptera.*] **338**

Culot, J. Noctuelles et Géomètres d'Europe. i. Noctuelles. **2** Livr. 41 1917 Genève (209–224) pls. lxxix and lxxx Livr. 42 1917 (225–232) pl. lxxxi. [*Lepidoptera.*] **339**

Currie, Bertha P. *Gomphus parvidens*, a new species of dragonfly from Maryland. P. U. S. nat. Mus. Washington **53** No. 2199 1917 (223–226) pls. xxvii and xxviii. [*Paraneuroptera.*] **341**

Curtis, W. P. The coloration problem, ii. Ent. Rec. London **29** 1917 (5–11, &c.). **341a**

Cushman, R. A. A revision of *hymenopterous* insects of the tribe Cremastini of America, north of Mexico. P. U. S. nat. Mus. Washington **53** No. 2219 1917 (503–551). **342**

Cushman, R. A. Eight new species of reared ichneumon-flies, with notes on some other species. P. U. S. nat. Mus. Washington **53** No. 2216 (457–469). [*Hymenoptera.*] **343**

Davidson, W. M. Early spring Syrphidae in California and a new *Pipiza*. Ent. News Philadelphia **28** 1917 (414–419). [*Diptera.*] **344**

Davidson, W. M. Economic *Syrphidae* in California. J. Econ. Ent. Concord N. H. **9** 1916 (454–457). [*Diptera.*] **344a**

Davidson, W. M. Little known western plant-lice, 2. J. econ. Ent. Concord **10** 1917 (290–297). [*Homoptera.*] **345**

Davis, J. J. Papers on *Aphididae*. The yellow clover aphis. (*Callipterus trifolii* Monell.) Washington U.S. Dept. Agric. Bur. Ent. Tech. Ser. No. **25** (Pt. 2) 1914 (i–iv 17–40) pl. ii; ff. 10–15. [*Diptera.*] **346**

Davis, W. T. Two new Cicadas from Lower California, Mexico. J. New York ent. Soc. **25** 1917 (6–10) pl. ii. [*Homoptera.*] **347**

Davis, W. T. Sonoran cicadas collected by Harry H. Knight, Dr. Joseph Bequaert and others, with descriptions of new species. J. N. York ent. Soc. **25** 1917 (203–215) pl. xiii. [*Homoptera.*] **348**

Debski, B. Sur la femelle de *Nomioides fasciatus* Friese et description des autres *Nomioides* d'Egypte. Bull. Soc. ent. Egypte **10** 1917 (25–50). [*Hymenoptera.*] **349**

De Gryse, J. J. The hypermetamorphism of the *lepidopterous* sapfeeders. Washington D.C. Proc. ent. Soc. **18** 1916 (164–168). **350**

Del Guercio, G. Contribuzione alla conoscenza degli Afidi. Redia Firenze **12** 1917 (197–277) pls. ii–iv. [*Homoptera.*] **351**

Demaison, L. Observations sur les *Lépidoptères* de quelques îles de l'Europe occidentale. Bull. Soc. ent. France **1917** 1917 (171–173). **352**

Demoll, R. Die Auffassung des Fliegens der Käfer. Eine zoologische Irrlehre. Zool. Anz. Leipzig **49** 1917 (285 and 286). [*Coleoptera.*] **353**

Desbordes, H. Contribution à la connaissance des Histérides. 2e mémoire. Synopsis de divers groupes d'Histeridae. Ann. Soc. ent. France **85** 1917 (297–326). [*Coleoptera.*] **354**

Desbordes, H. Contribution à la connaissance des Histérides 3e. mémoire. Ann. Soc. ent. France **86** 1917 (165–192). [*Coleoptera.*] **355**

Desbordes, H. Liste des Histeridae récoltés en 1917 par M. L. Burgeon au Congo belge centrale, à Kindu (Maniéma), et description des espèces nouvelles. Bull. Soc. ent. France **1917** 1917 (211–215). [*Coleoptera.*] **356**

Desbordes, H. Description de deux *Saprinus* nouveaux du Haut-Sénégal. Bull. Soc. ent. France **1917** 1918 (325–326). [*Coleoptera.*] **357**

Dewitz, J. Nochmals über die Entstehung der braunen Farbe gewisser Kokons. Zool. Anz. Leipzig **49** 1917 (170–176). [*Lepidoptera.*] **358**

Dickerson, E. L. Notes on *Leptobyrsa rhododendri* Horv. J. N. York ent. Soc. **25** 1917 (105–112) pl. viii. [*Heteroptera.*] **359**

Dickerson, E. L. and **Weiss,** H. B. *Idiocerus scurra* Germar, a poplar leaf-hopper. J. N. York ent. Soc. **25** 1917 (218–224) pl. xv. [*Homoptera.*] **360**

Dickerson, E. L. and **Weiss,** H. B. The azalea lace-bug, *Stephanitis pyrioides* Scott. Ent. News Philadelphia **28** 1917 (101–105) pl. ix. [*Heteroptera.*] **361**

Dietz, W. G. Key to the North American species of the tricolor group of the *dipterous* genus *Tipula* Linnaeus. Ent. News Philadelphia **28** 1917 (145–151) pl. xi. **362**

Distant, W. L. Rhynchota [of the Seychelles]. Part 2. Suborder *Homoptera.* Trans. Linn. Soc. London **17** 1917 (273–322) pls. xlix–li. **363**

Distant, W. L. The *Homoptera* of Indo-China. Ann. Nat. Hist. London **19** 1917 (100–104). **364**

Distant, W. L. Descriptions of some Ethiopian and Australian *Homoptera.* Ann. Nat. Hist. London **20** 1917 (186–191). **365**

Distant, W. L. The *Homoptera* of Indo-China. Ann. Nat. Hist. London **20** 1917 (319–325). **366**

Distant, W. L. On some Rhynchota of economic importance from Colombia. Bull. ent. Res. London **7** 1917 (381–382) pt. v. [*Heteroptera.*] **367**

Distant, W. L. *vide etiam* Arrow, &c.

Dod, F. H. W. The insect collections of Canada. Collection of *Macrolepidoptera* owned by F. H. Wolley Dod. Canad. Entom. London Can. **49** 1917 (240–248). **368**

Dodd, A. P. Records, &c., of Australian Chalcidoidea. Adelaide S. Aust. Trans. R. Soc. **41** 1917 (344–368). [*Hymenoptera.*] **369**

Dodero, A. Materiali per lo studio dei *Coleotteri* italiani con descrizioni di nuove specie. iii. Ann. Mus. Doria Genova **47** 1917 (377–386). **370**

Dognin, P. Hétérocères nouveaux de l'Amérique du Sud. Fasc. **13** Rennes 1917 (1–19). [*Lepidoptera.*] **371**

Donisthorpe, H. St. J. K. *Elater praeustus* F., an Irish beetle. Irish Nat. Dublin **27** 1917 (99). [*Coleoptera.*] **372**

Donisthorpe, H. Myrmecophilous notes for 1916. Ent. Rec. London **29** 1917 (30–33, 48–52). [*Hymenoptera.*] **373**

Donisthorpe, H. *Dolichoderus* (*Hypoclinea*) *crawleyi* n. sp., a species of ant new to science ; with a few notes on the genus. Ent. Rec. London **29** 1917 (201). [*Hymenoptera.*] **374**

Doop, J. E. A. den. *Lasioderma* en *Anobium* in koriander- en karweizaden. [Lasioderma und Anobium in Koreander—und Kümmelsaat.] Medan Meded. Deli-proefst. **10** 1917 (190–202). [*Coleoptera.*] **375**

Doop, J. E. A. den. De verspreiding van *Trichogramma,* den eiparasiet van *Heliothis obsoleta* Fabricius, ter oostkust van Sumatra. [Die Verbreitung von *Trichogramma,* dem Eiparasit von *Heliothis obsoleta* Fabricius, an der Ostküste Sumatra's.] Medan Meded. Deli Proefst. 10 1918 (213–220 1 Karte). [*Hymenoptera.*] **376**

Dove, W. E. Some notes concerning overwintering of the house-fly, *Musca domestica*, at Dallas, Texas. J. Econ. Ent. Concord. N. H. **9** 1916 (528–538). [*Diptera.*] **376a**

Dove, W. E. Some biological and control studies of *Gastrophilus haemorrhoidalis* and other bots of horses. Bull. U.S. Dep. Agric .Ent. **597** 1917 (51 pp.) 5 pls. [*Diptera.*] **377**

Dozier, H. L. The life-history of the okra or mallow caterpillar (*Cosmophila erosa* Hübner). J. econ. Ent. Concord. **10** 1917 (536–542) pls. xxvi and xxvii. [*Lepidoptera*]. **378**

Drake, C. J. New and noteworthy Tingidae from the United States. Ohio Nat. Columbus **17** 1917 (213–215). [*Heteroptera.*] **379**

Drake, C. J. Key to the nearctic species of *Gargaphia*, with the description of a new species. Ent. News **28** 1917 (227, 228). [*Heteroptera.*] **380**

Drake, C. J. A survey of the north-american species of *Merragata*. Ohio J. Sci. Columbus **17** 1917 (101–105). [*Heteroptera.*] **381**

Drake, C. J. *vide* Osborn and Drake.

Draudt *vide* Seitz, A.

Dudgeon, G. C. and **Gough,** L. H. *Rhogas kitcheneri* n. sp. Bull. Soc. ent. Egypte **1912** 1914 (140). [*Hymenoptera.*] **382**

Dunn, L. H. The cocoa-nut tree caterpillar (*Brassolis isthmia*) of Panama. J. econ. Ent. Concord **10** 1917 (473–488) pls. xxii and xxiii. [*Lepidoptera.*] **383**

Dunn, L. H. A simple method of identifying the *Anopheles* mosquitoes of the canal zone. Ent. News Philadelphia **28** 1917 (14–19). [*Diptera.*] **384**

Duporte, E. M. The death-feigning instinct. Canad. Entom. London Can. **49** 1917 (221–225). **385**

Durrant, J. H. *Microlepidoptera* Pterophorina and Tineina) collected by the British ornithologists' union and Wollaston expeditions in the Snow mountains, Southern Dutch New Guinea, Rep. B.O.U. exp. **2** 1916 No. 15 (149–168). **386**

Durrant, J. H. *vide* Morice and Durrant.

Dwight, I. A synopsis of the petiolate wasps of the family Eumenidae (*Hymenoptera*) found in America north of Mexico. Ann. ent. Soc. Amer. Columbus **10** 1917 (345–366). **387**

Dyar, H. S. A note on *Cisthene*. Insec. inscit. Washington **5** 1917 (8–10). [*Lepidoptera.*] **388**

Dyar, H. G. The mosquitoes of the mountains of California. Insec. inscit. Washington **5** 1917 (11–21). [*Diptera.*] **389**

Dyar, H. G. The Barnes and McDunnough list. Insec. inscit. Washington **5** 1917 (41–44). [*Lepidoptera.*] **390**

Dyar, H. G. Three new North-american Phycitinae. Insec. inscit. Washington **5** 1917 (45 and 46). [*Lepidoptera.*] **391**

Dyar, H. G. A new phycitid from the Bahamas. Insec. inscit. Washington **5** 1917 (46 and 47). [*Lepidoptera.*] **392**

Dyar, H. G. A new noctuid from Brazil. Insec. inscit. Washington **5** 1917 (50 and 51). [*Lepidoptera.*] **393**

Dyar, H. G. Miscellaneous new american *Lepidoptera*. Insec. inscit. Washington **5** 1917 (65–68). [*Lepidoptera.*] **394**

Dyar, H. G. Notes on North-american Pyraustinae. Insec. inscit. Washington **5** 1917 (69–74). [*Lepidoptera.*] **395**

Dyar, H. G. Notes on North-american *Nymphulinae*. Insec. inscit. Washington **5** 1917 (75–79). [*Lepidoptera.*] **396**

Dyar, H. G. Notes on North-american Schoenobünae. Insec. inscit. Washington **5** 1917 (79–84). [*Lepidoptera.*] **397**

Dyar, H. G. Seven new crambids from the United States. Insec. inscit. Washington **5** 1917 (84–87). [*Lepidoptera.*] **398**

Dyar, H. G. Seven new pyralids from British Guiana. Insec. inscit. Washington **5** 1917 (88–91). [*Lepidoptera.*] **399**

Dyar, H. G. The mosquitoes of the pacific northwest. Insec. inscit. Washington **5** 1917 (97–102). [*Diptera.*] **400**

Dyar, H. G. Notes on *Aedes* at Lake Pend d'oreille, Idaho. Insec. inscit. Washington **5** 1917 (102–104). [*Diptera.*] **401**

Dyar, H. G. Notes on the *Aedes* of Montana. Insec. inscit. Washington **5** 1917 (104–121). [*Diptera.*] **402**

Dyar, H. G. A new *Aedes* from the Rocky-mountain region. Insec. inscit. Washington **5** 1917 (127). [*Diptera.*] **403**

Dyar, H. G. Descriptions of *lepidopterous* larvae from Mexico. Insec. inscit. Washington **5** 1917 (128–132). **404**

Dyar, H. G. A new Pyralid from California. Insec. inscit. Washington **5** 1917 (132). [*Lepidoptera.*] **405**

Dyar, H. G. A second note on the species of *Culex* of the Bahamas. Insec. inscit. Washington **5** 1917 (183–187). [*Diptera.*] **406**

Dyar, H. G. *vide* Howard, Dyar & Knab.

Dyar, H. G. and **Knab, F.** Bromelicolous *Anopheles.* Insec. inscit. Washington **5** 1917 (38–40). [*Diptera.*] **407**

Dyar, H. G. and **Knab, F.** New american mosquitoes. Insec. inscit. Washington **5** 1917 (165–169). [*Diptera.*] **408**

Dyar, H. G. and **Knab, F.** The genus *Culex* in the United States. Insec. inscit. Washington **5** 1917 (170–183). [*Diptera.*] **409**

Edwards, F. W. Notes on Culicidae, with descriptions of new species. Bull. ent. Res. London **7** 1917 (201–229). [*Diptera.*] **410**

Edwards, J. On *Rhynchites ophthalmicus* Stephens, with a table of the british species of that genus. Ent. Mo. Mag. London **53** 1917 (22–26). [*Coleoptera.*] **411**

Ejikoff, —. Influence de l'inanition sur la métamorphose des mouches à ver. Rev. zool. russe Moscow **2** 1917 (110–121). **412**

Elliott, E. A. On certain Stephanidæ. Entomologist London **50** 1917 (129–130). [*Hymenoptera.*] **413**

Elliott, A. E. Two new species of *Diastephanus* Enderl. Entomologist London **50** 1917 (131). [*Hymenoptera.*] **414**

Ellis, E. V. Butterflies of Tharrawady and the Pegu Yoma. J. N. H. Soc. Bombay **25** 1917 (104–135). [*Lepidoptera.*] **415**

Elwyn, A. Effect of humidity on pupal duration and on pupal mortality of *Drosophila ampelophila* Loew. Bull. Amer. Mus. New York **37** 1917 (347–353). [*Diptera.*] **415a**

Emery, C. Questions de nomenclature et synonymies relatives à quelques genres et espèces de Formicides. Bull. Soc. ent. France **1917** 1917 (94–97). [*Hymenoptera.*] **416**

Emery, C. Escursioni zoologiche del Dr. Enrico Festa nell' isola di Rodi. Boll. Mus. Torino **30** 1915 ? No. 701 (7 pp). [*Hymenoptera.*] **417**

Emery, C. Les *Pheidole* du groupe *megacephala.* Rev. zool. afric. Bruxelles **4** 1916 (223–250). [*Hymenoptera.*] **418**

Emmerez, D. de Charmoy d'. Notes relative to the importation of *Tiphia parallela,* Smith, from Barbados to Mauritius for the control of *Phytalus smithi* Arrow. Bull. ent. Res. London **8** 1917 (93–102). [*Hymenoptera.*] **419**

Enderlein, G. *Dipterologische* Studien xvi. Zool. Anz. Leipzig **49** 1917 (57–72). **420**

Enderlein, G. Ueber einige subantarktische Mallophagen. Zool. Anz. Leipzig **49** 1917 (240–245). [*Lipoptera.*] **421**

Enderlein, G. Beiträge zur Kenntnis der Copeognathen. iv. Zur Kenntnis der Copeognathen des Kongogebietes. Zool. Anz. Leipzig **49** 1917 (254–256). [*Procoptera.*] **422**

Enderlein, G. Psyllidologica iv. Zool. Anz. Leipzig. **49** (344–352). [*Homoptera.*] **423**

Enslin, E. Beiträge zur Kenntnis der Tenthredinoidea. iv. Ent. Mitt. Berlin **6** 1917 (238–242). [*Hymenoptera.*] **424**

Ericson, I. B. Neue Trichopterygidenfunde in Schweden. Ent. Tidskr. **38** (207–208). [*Coleoptera*]. **425**

Esben-Petersen, P. Neue und wenig bekannte Mantispiden. Ark. Zool. Stockholm **11** No. 10 1917 (15) 2 text figs. [*Neuroptera.*] **426**

Esben-Petersen, P. Lidt om Koldfeber og Anopheles claviger. *Anopheles claviger* and aguefever in Denmark, especially in the islands of Lolland and Falster. København Flora og Fauna **1917** (35–39). [*Diptera.*] **427**

Esben-Petersen, P. New and little-known Australian Osmylidae. København Nath. Medd. **68** 1917 (1–5). 2 figs: [*Neuroptera.*] **428**

Esben-Petersen, P. Two species of Bittacidae (*Neuroptera*) from South Africa. Ann. S. Afric. Mus. **17** 1917 (187–190). **429**

Escalera, M. M. de la. Un nuovo ptinido de España central. Bol. Soc. esp. Hist. nat. Madrid **17** 1917 (234). [*Coleoptera*]. **430**

Essig, E. O. The chrysanthemum gall-fly, *Diarthronomyia hypogaea* (F. Löw). J. Econ. Ent. Concord N. H. **9** 1916 (461–468) pls. 34 35. [*Diptera.*] **430a**

Essig, E. O. The tomato and laurel psyllids. J. econ. Ent. Concord **10** 1917 (433–444) pl. xx. [*Homoptera.*] **431**

Essig, E. O. The olive insects of California. Bull. Berkeley Agric. Exp. Stat. **283** 1917) 43–64). **432**

Everts, Ed. Lyst van Coleoptera uit Limburg. [Liste von *Coleopteren* aus Holländisch Limburg.] 's Gravenhage, Tydschr. Ent. **60** 1917 (vii–xiii.) **433**

Everts, Ed. Lyst van *Coleoptera* uit het omliggend gebied van België, de Rynprovincie en Westfalen, die wellicht in de provincie Limburg zouden kunnen ontdekt worden. [Liste von Coleopteren aus dem umliegenden Gebiete von Belgien, der Rheinprovinz und Westphalen, welche vielleicht in der Provinz Limburg entdeckt werden könnten.] Heerlen, Natuurhistorisch Genootschap in Limburg Mededeelingen **1916** 1917 (133–150). **434**

Everts, Ed. Nieuwe vondsten voor de Nederlandsche Coleopteren-fauna. x. [Neue Funde für niederländische *Coleopteren*–fauna. x.] 's Gravenhage Ber. Ned. Ent. Ver. **4** 1917 (366–371). **435**

Everts, Ed. Nieuwe vondsten voor de Nederleandsche Coleopteren-fauna xi. [Neue Funde für die niederländische *Coleopteren* fauna xi.] 's Gravenhage Ber. Ned. Ent. Ver. **4** 1917 (383–390). **436**

Everts, Ed. Nieuwe vondsten voor de Nederlandsche Coleopteren-fauna xii. [Neue Funde für die niederländische *Coleopteren*–fauna xii.] 's Gravenhage Ber. Ned. Ent. Ver. **5** 1917 (4–10). **437**

Everts, Ed. Nieuwe vondsten voor de Nederlandsche Coleopteren-fauna xiii. [Neue Funde für die niederländische *Coleopteren*-fauna xiii.] 's Gravenhage Ber. Ned. Ent. Ver. **5** 1917 (17–21). **438**

Everts, Ed. Zeldzame en minder algemeene Coleoptera, op de excursies in Juni verzameld. [Seltene und weniger allgemeine *Coleopteren*, auf den Excursionen im Monat Juni in Gelderland gesammelt.] 's Gravenhage Ber. Ned. Ent. Ver. **5** 1917 (21–22). **439**

Ewing, H. E. Parthenogenesis in the pear-slug saw-fly. Ann. ent. Soc., Amer. Columbus **10** 1917 (330–335) [*Hymenoptera.*] **440**

Fagan, Margaret M. *vide* Rohwer and Fagan.

Fagniez, C. Description d'un *Lathrobium* nouveau de France. Bull. Soc. ent. France **1916** 1917 (311). [*Coleoptera.*] **441**

Fagniez, C. Étude sur les *Royerella* Jean. de Dauphiné. Bull. Soc. ent. France **1917** 1917 (90–93). [*Coleoptera.*] **442**

Fall, H. C. New Dytiscidae. J. N. York ent. Soc. **25** 1917 (163–182). [*Coleoptera.*] **443**

Fall, H. C. A new genus and species of Buprestidae. Ent. News Philadelphia **28** 1917 (68–70). [*Coleoptera.*] **444**

Fall, H. C. New *Coleoptera*, vi & vii. Canad. Entom. London Can. **49** 1917 (163–171 385–390). **445**

Faroult, V. Notes on captures of algerian and tunisian *Lepidoptera* [*Rhopalocera*]. Novit. zool. Tring **24** 1917 (318–322). **446**

Felt, E. P. Distribution of gall midges. Proc. Nation. Ac. Washington **3** 1917 (349–354). [*Diptera.*] **447**

Felt, E. P. Household and camp insects. New York Mus. Bull. Albany **194** 1917 (1–84). **448**

Felt, E. Little known midge galls of certain composites. Ottawa Nat. **31** 1917 (13 & 14). [*Diptera.*] **449**

Felt, E. P. Two new sawflies. Canad. Entom. London Can. **49** 1917 (191 & 192). [*Hymenoptera.*] **450**

Felt, E. P. New gall midges. J. N. York ent. Soc. **25** 1917 (193–196) [*Diptera.*] **451**

Felt, E. P. New indian gall midges. Ent. News Philadelphia **28** 1917 (73–76). [*Diptera.*] **452**

Felt, E. P. Indian gall midges. Ent. News Philadelphia **28** 1917 (369–372). [*Diptera.*] **453**

Felt, E. P. *Asphondylia websteri* n. sp. J. econ. ent. Concord **10** 1917 (562). [*Diptera.*] **454**

Felt, E. P. and **Stage,** H. J. Biological observations. Albany Univ. St. N. Y. Mus. Bull. No. **186** 1916 (65–70). [*Diptera.*] **454a**

Fenton, F. A. Observations on *Lecanium corni* Bouché and *Physokermes piceae* Schr. Canad. Entom. London Can. **49** 1917 (309–320) pls. xv and xvi. [*Homoptera.*] **455**

Ferrante, G. Contributo al catalogo dei *Coleotteri* dell' Egitto. Seguito. Staphylinidae. Bull. Soc. ent. Egypte **7** 1916 (157–176). **456**

Ferrante, G. Espèces et variétés. Bull. Soc. ent. Egypte **10** 1917 (15–21). **457**

Ferris, G. F. Mallophaga and Anoplura from South Africa, with list of mammalian hosts of african species. Ann. Durban Mus. **1** 1916 (230–252). **458**

Ferris, G. F. A new genus and species of Coccidae. Canad. Entom. London Can. **49** 1917 (375). [*Homoptera.*] **459**

Feytaud, J. Sur la réproduction parthénogénétique de l'otiorhynque sillonné (*Otiorhynchus sulcatus* Fabr.). Paris C. R. Acad. Sci. **165** 1917 (767–769). [*Coleoptera.*] **460**

Figueroa, S. Contribución al conocimento del género *Epinephele* Hübner et auct. Revist. Chilena **20** 1916 (29–35). [*Lepidoptera.*] **461**

Figueroa, C. S. Descripcion de un nuevo *Epinephele* y clave de las especies chilenas del género. Revist. chilena **21** 1917 (85–88). [*Lepidoptera.*] **462**

Fisher, W. S. A new species of *Agrilus* from California. Canad. Entom. London Can. **49** 1917 (287) [*Coleoptera.*] **463**

Fisher, W. S. A new species of *Xylotrechus.* Washington D.C. Proc. ent. Soc. **18** 1917 (214 & 215). [*Coleoptera.*] **464**

Fiske, W. F. Insects injurious to vegetation. Bull. ent. Res. London **7** 1917 (383–389). **465**

Fleischer, A. Bestimmungstabelle der paläarktischen *Psalidium*-Arten. Wien. ent, Zeit. Vienna **33** 1914 (211–227). [*Coleoptera.*] **465a**

Fletcher, T. B. Report of the Imperial entomologist. Sci. Rep. Agric. Inst. Pusa 1917 (71–102). **466**

Fletcher, T. B. *Icerya purchasi* in Ceylon: a warning to India. Agric. J. India Calcutta **12** 1917 (525–531). pl. xxxviii. [*Homoptera.*] **467**

Fletcher, T. B. Economic zoology, Part i, agricultural entomology. Board sci. advice India 1915–16 1917 (22 pp.). **468**

Fletcher, T. B. Report of the proceedings of the second entomological meeting held at Pusa on the 5th to 12th February, 1917. Calcutta 1917 (340 + xii pp.) 35 pls. **469**

Fleutiaux, E. Descriptions de deux espèces nouvelles d'Elateridae, appartenant au genre *Dima.* Bull. Soc. ent. France **1916** 1917 (256). [*Coleoptera.*] **470**

Fleutiaux, E. Nouvelle liste de Cicindelidae de l'Indo-chine. Bull. Soc. ent. France **1917** 1918 (368–370). [*Coleoptera.*] **471**

Florence, Laura. The pacific coast species of *Xylococcus* (Scale insects). Ann. ent. Soc. Amer. **10** 1917 (147–162) pls. xii–xv. [*Homoptera.*] **472**

Foà, Anna. L'epitelio dell' intestino medio nel baco da seta sano e in quello malato di flaccidezza. Boll. Lab. Portici **12** 1917 (217–244) pls. i & ii. [*Lepidoptera.*] **473**

Folsom, J. W. North American *collembolous* insects of the subfamily Onychiurinae. P. U. S. nat. Mus. Washington **53** No. 2222 1917 (637–659) pls. lxviii–lxxix. **474**

Foot, Katharine and **Strobell,** E. C. Results of crossing *Euschistus variolarius* and *Euschistus ictericus* with reference to the inheritance of two exclusively male characters. Biol. Bull. Woods Hole **32** 1917 (322–342) 4 pls. [*Heteroptera.*] **475**

Forbes, S. A. Observations and experiments on the San José scale. Agric. Exp. Sta. Illinois Urbana Bull. No. **180** 1915 (545–561) ff. 1–3. [*Homoptera.*] **475A**

Forbes, W. T. M. The genera of Hydriomeninae of the United States. J. N. York ent. Soc. **25** 1917 (44–67). [*Lepidoptera.*] **476**

Forbes, W. T. M. Notes on West-indian Syntomidae and Arctiidae. Bull. Amer. Mus. New York **37** 1917 (339–345). [*Lepidoptera.*] **476A**

Ford, G. H. Observations on the larval and pupal stages of *Agriotes obscurus,* Linnaeus. Ann. appl. Biol. Cambridge **3** 1917 (97–115) pls. xvi & xvii. [*Coleoptera.*] **478**

Forel, A. Cadre synoptique actuel de la faune universelle des fourmis. Bull. Soc. vaud. Lausanne **51** 1917 (229–253). [*Hymenoptera.*] **479**

Foster, A. H. A list of *Macrolepidoptera* occurring in north Hertfordshire, with notes on each species. Tr. Hertfordsh. Soc. **16** 1917 (237–258). **480**

Foucher, G. Sur l'apparition du *Carausius morosus* ♂ et sa longévité. Paris C.R. Acad. Sci. **165** 1917 (511–513). [*Orthoptera.*] **481**

Fountaine, Margaret E. List of butterflies taken in the neighbourhood of Los Angeles, California. Entomologist London **50** 1917 (154–156). [*Lepidoptera.*] **482**

Fox, C. Some new *Siphonaptera.* Washington Treas. Dept. U.S. Publ. Hlth. Serv. Hyg. Lab. Bull. No. **97** 1914 (7–17) pls. i–v. **483**

Fox, C. A further report on the identification of some *Siphonaptera* from the Philippine islands. Washington Treas. Dept. U.S. Publ. Hlth. Serv. Hyg. Lab. Bull. No. **97** 1914 (18). **484**

Fox, C. The taxonomic value of the copulatory organs of the females in the order *Siphonaptera.* Washington Treas. Dept. U.S. Publ. Hlth. Serv. Hyg. Lab. Bull. No. **97** 1914 (19–25) pls. vi–xxii. **485**

Fox, H. Field notes on Virginia *Orthoptera.* P.U.S. nat. Mus. Washington **52** No. 2176 (199–234). **486**

Fraser, F. C. The female of the dragon fly, *Brachythemis fuscopalliata* (Ris). J. Bombay Soc. **25** (282–283) pl. [*Paraneuroptera.*] **487**

Frers, A. G. Cuatro *himenópteros* parásitos de *Pachodynerus argentinus* Sauss. o de *Trypoxylon platense* Brèthes. Physis Buenos Aires **3** 1917. (88–89). **488**

Frey, R. *vide* Poppius, B.

Friese, H. Results of Dr. E. Mjöberg's Swedish Scientific Expeditions to Australia, 1910–1913. 13. Apidae Ark. Zool. Stockholm **11** No. 2 1917 (9). [*Hymenoptera.*] **489**

Frisendahl, A. Nya svenska *Coleoptera.* Ent. Tidskr. Uppsala **38** 1917 (298–301). **490**

Frison, T. H. Notes on Bombidae, and on the life history of *Bombus auricomus* Robt. Ann. ent. Soc. Amer. Columbus **10** 1917 (277–286) pls. xxiii & xxiv. [*Hymenoptera.*] **491**

Froggatt, W. W. Forest longicorn beetles and their parasites. Agric. Gaz. N.S.W. **1916** (561–567) 3 pls. [*Hymenoptera.*] **492**

Froggatt, W. W. A descriptive catalogue of the scale insects (Coccidae) of Australia (continued). Agric. Gaz. N.S.W. Sydney **27** 1916 & 1917 (425–430 568–578 809–816 883–888) and **28** 1917 (134–140 505–514). [*Homoptera.*] **493**

Froggatt, W. W. Insects and prickly pear. Agric. Gaz. N.S.W. Sydney **28** 1917 (417–426). **494**

Froggatt, W. W. Policemen flies. Agric. Gaz. N.S.W. Sydney **28** 1917 (667–669). [*Hymenoptera.*] **495**

Froggatt, W. W. A lead-boring beetle (*Xylothrips gibbicollis.* Agric. Gaz. N.S.W. Sydney **28** 1917 (814) [*Coleoptera.*] **496**

Froggatt, W. W. Entomological notes. Agric. Gaz. N.S.W. Sydney **28** 1917 (891–895). **497**

Froggatt, W. W. and **Froggatt, J. L.** Sheep-maggot flies. No. 3. Dep. Agric. N.S.W. Farm-Bull. **113** (37 pp.). [*Hymenoptera.*] **498**

Frohawk, F. W. Destruction of wheat by wasps. Entomologist London **50** 1917 (132–133). [*Hymenoptera.*] **499**

Fruhstorfer, H. Neue palaearktische Lycaeniden. Deutsche ent. Zs. Iris **31** 1917 (24–43). [*Lepidoptera.*] **500**

Fruhstorfer, H. Altes und Neues über Erebien. Deutsche ent. Zs. Iris **31** 1917 (43–56). [*Lepidoptera.*] **501**

Fruhstorfer, H. Nymphalidae pp. 705–766; Erycinidae pp. 767–797, Lycaenidae pp. 803–823 [continued by Grünberg q.v.] Seitz Grosschmetterl. Faun. exot. Indo-austral. **9** 1914–1916. [*Lepidoptera.*] **501a**

Fruhstorfer, H. *vide* Seitz, A.

Fryer, J. C. F. Insect pests of basket willows. J. Board Agric. London **24** 1917 (844–852) 2 pls. **502**

Fuente, J. M. de la. Enumeración de las especies zoológicas que han sido descritas por primera vez sobre ejemplares procedentes de la provincia de Ciudad real. Bol. Soc. espan. Madrid **17** 1917 (277–299). **503**

Fullaway D. T. Description of a new species of *Spalangia.* P. Hawai ent. Soc. **3** 1917 (292–294). [*Hymenoptera.*] **504**

Fullaway, D. T. Tobacco insects in Hawaii. Agric. Exp. Sta. Hawaii Honolulu Bull. No. **34** 1914 (1–20) ff. 1–9. **505**

Fyles, T. W. Quebec dragon-flies. Ottawa Nat. **29** Ottawa 1916 (66–67). [*Paraneuroptera.*] **506**

Gahan, A. B. Descriptions of some new *parasitic Hymenoptera.* P. U. S. nat. Mus. Washington **53** No. 2197 1917 (195–217). **507**

Gahan, A. B. and **Rohwer, S. A.** Lectotypes of the species of *Hymenoptera* (except Apoidea) described by Abbé Provancher. Canad. Entom. London Can. **49** 1917 (298–308 331–336 391–400 427–433). **508**

Gahan, C. J. *vide* Arrow, &c.

Gallardo, A. Notes critiques sur les "Formicides sud-américains nouveaux ou peu connus du Docteur Santschi." Physis Buenos Aires **3** 1917 (48–51). [*Hymenoptera.*] **509**

Garin, C. La prophylaxie du paludisme en Macédoine. Rev. scient. Paris **1917** (301–306). [*Diptera.*] **510**

Garman, P. The Zygoptera or damsel-flies of Illinois. Bull. Illinois Lab. **12** art. 4 1917 (411–587) pls. lviii–lxxiii. [*Paraneuroptera.*] **511**

Gatenby, J. B. The embryonic development of *Trichogramma evanescens,* Westw., monembryonic egg-parasite of *Donacia simplex* Fab. Q. J. Microsc. Sci. London **62** 1917 (149–187) pls. x–xii and corrections p. (613 and 614). [*Hymenoptera.*] **512**

Gatenby, J. B. The cytoplasmic inclusions of the germ-cells. Part i, *Lepidoptera.* Q. J. Microsc. Sci. London **62** 1917 (407–463) pls. xxiii–xxv. **513**

Gatenby, J. B. The degenerate (apyrene) sperm-formation of moths as an index to the inter-relations of the various bodies of the spermatozoon. Q. J. Microsc. Sci. London **62** 1917 (465–488) pl.xxvi. [*Lepidoptera.*] **514**

Gavoy, L. Contribution à la faune entomologique du Tarn. (*Coléoptères*). 2e Supplément. Bull. Soc. Et. Sci. Aude **25** 1914? (77–106). **515**

Gedoelst, L. Notes sur les Oestrides. Rev. Zool. Afric. Bruxelles **4** 1916 (144–161). [*Diptera.*] **516**

Gedoelst, L. Notes sur les Oestrides. ii. Rev. Zool. Afric. Bruxelles **4** 1916 (259–264). [*Diptera.*] **517**

Germain, P., and **Kerremans, C.** Apuntes entomolójicos. Buprestidos del Museo de Santiago de Chile. An. Univ. Santiago Chile **120** 1907 (603–631). [*Coleoptera.*] **518**

Gestro, R. Res ligusticae lxii. Ricordo di Massimiliano Spinola. Ann. Mus. Doria Genova **47** 1916 (33–53) Portrait. **519**

Gestro, R. Alcune osservazioni intorno ai Paussidi. Ann. Mus. Doria Genova **47** 1916 (355–359). [*Coleoptera.*] **520**

Gestro, R. Materiali per lo studio delle Hispidae, li. Saggio sulle Hispidae delle isole Filippine. Ann. Mus. Doria Genova **47** 1917 (387–440). [*Coleoptera.*] **521**

Geyer, E. W. *vide* Quaintance & Geyer.

Giacomelli, E. Nuevos estudios y observaciones sobre Piéridas argèntinas. Physis Buenos Aires **3** 1917 (370–385). [*Lepidoptera.*] **522**

Giacomelli, E. Sinopsis de los *Lepidopteros* chilenos del género *Tatochila* Butl. Revist. chilena **20** 1916 (41–57) pls. i & ii. **523**

Gibbs, A. E. The satyrid butterflies of Hertfordshire, with a short study of *Pararge aegeria.* Trans. Hertfordshire Nat. Hist. Soc. **16** 1917 (173–158) pl. xv. [*Lepidoptera.*] **524**

Gibson, A. Common garden insects and their control. Canada Dep. Agric. Ent. Ottawa 1917 Circ. **9** (20 pp.). **525**

Gibson, E. H. A new species of *Corythuca* from the Northwest. Ent. News Philadelphia **28** 1917 (258). [*Heteroptera.*] **526**

Gibson, E. H. The genus *Harmostes* Burm. Ent. News Philadelphia **28** 1917 (439–450). [*Heteroptera.*[**527**

Gibson, E. H. Three new species of Jassoidea from Missouri. Canad. Entom. London Can. **49** 1917 (183 and 184). [*Homoptera.*]. **528**

Gibson, E. H. Two new species of *Dicyphus* from Porto Rico. Canad. Entom. London Can. **49** 1917 (218). [*Heteroptera.*] **529**

Gibson, E. H. and **Wells,** Emma. The genus *Ophiderma* Fairm. J. N. York ent. Soc. **25** 1917 (199–203). [*Homoptera.*] **530**

Giffard, W. M. Reference tables of the hawaiian Delphacids and their food-plants. Proc. Hawai. ent. Soc. **3** 1917 (339–348). [*Homoptera.*] **531**

Giffard, W. M. Investigation of spread of fruitfly parasites [*Opius humilis* and *Diachasma tryoni*] in Kona, Hawaii. Honolulu, Proc. Hawaiian Ent. Soc. **3** 1915 (90–93). [*Hymenoptera.*] **531a**

Giglio-Tos, E. Mantidi esotici. Generi e specie nuove. Bull. Soc. ent. ital. Firenze **48** 1917 (43–108). [*Orthoptera.*] **532**

Giglio-Tos, E. *Ortotteri* raccolti nell'Eritrea dal Dott. Andreini. Bull. Soc. ent. ital., Firenze. **48** 1917 (131–138). **533**

Giglio-Tos, E. Note al catalogo dei Mantidi di Kirby. Bull. Soc. ent. ital. Firenze **48** 1917 (139–163). [*Orthoptera.*] **534**

Giglio-Tos, E. Mantidi esotici. Boll. Mus. Torino **30** 1915. No. 702 (16 pp.). [*Orthoptera*]. **535**

Giglio-Tos, E. *Ortotteri* raccolti nella Somalia italiana meridionale. Redia Firenze **12** 1917 (279–287.) **536**

Gill, J. B. The pecan leaf casebearer. Bull. U.S. Dep. Agric. Ent. Washington **571** 1917 (1–28) 3 pls. [*Lepidoptera.*] **537**

Gillette, C. P. Some Colorado species of the genus *Lachnus.* Ann. ent. Soc. Amer. Columbus **10** 1917 (133–144) pls. x and xi. [*Homoptera.*] **538**

Gillette, C. P. Two new aphid genera and some new species. Canad. Entom. London Can. **49** 1917 (193–198) pl. xi. [*Homoptera.*] **539**

Girault, A. A. The north-american species of *Pachyneuron,* with three new species. Psyche Boston **24** 1917 (88–90). [*Hymenoptera.*] **540**

Girault, A. A. New miscellaneous chalcid-flies from North-america. Psyche Boston **24** 1917 (91–99). [*Hymenoptera.*] **541**

Girault, A. A. A new species of the genus *Mymar* from the woods of Maryland with an important descriptive note. Psyche Boston **24** 1917 (99). [*Hymenoptera.*] **542**

Girault, A. A. A metallic species of *Cirrospilopsis* from Maryland. Psyche Boston **24** 1917 (100). [*Hymenoptera.*] **543**

Girault, A. A. A new species of *Closterocercus* from California. Psyche Boston **24** 1917 (101). [*Hymenoptera.*] **544**

Girault, A. A. A chalcid parasite of the pink boll-worm. Insec. inscit. Washington **5** 1917 (5). [*Hymenoptera.*] **545**

Girault, A. A. Some new australian Chalcid-flies, mostly of the family, Encyrtidae. Insec. inscit. Washington **5** 1917 (29–37). [*Hymenoptera.*] **546**

Girault, A. A. New australian chalcid-flies. Insec. inscit. Washington **5** 1917 (92–96, 133–155). [*Hymenoptera.*] **547**

Girault, A. A. Notes and descriptions of miscellaneous Chalcid-flies. P.U.S. nat. Mus. Washington **53** No. 2213 1917 (445–450). [*Hymenoptera.*] **548**

Girault, A. A. New chalcid-flies from Maryland. Ent. News Philadelphia **28** 1917 (20–23). [*Hymenoptera.*] **549**

Girault, A. A. The occurrence of the genus *Monobaeus* Foerster in North America. Ent. News Philadelphia **28** 1917 (106). [*Hymenoptera.*] **550**

Girault, A. A. New chalcid-flies from Maryland. 2. Ent. News Philadelphia **28** 1917 (255–257). [*Hymenoptera.*] **551**

Girault, A. A. The North-american species of *Trigonoderus* Westwood, females. Ent. News Philadelphia **28** 1917 (396–397). [*Hymenoptera.*] **553**

Girault, A. A. Two new genera of North American Entedoninae. Canad. Entom. London Can. **49** 1917 (110). [*Hymenoptera.*] **554**

Girault, A. A. The occurrence of the genus *Parachrysocharis* Girault in the United States. Canad. Entom. London Can. **49** 1917 (129). [*Hymenoptera.*] **555**

Girault, A. A. The North-american species of *Habrocytus.* Canad. Entom. London Can. **49** 1917 (178–182). [*Hymenoptera.*] **556**

Girault, A. A. A new West-indian Chalcid-fly. Canad. Entom. London Can. **49** 1917 (356). [*Hymenoptera.*] **557**

Girault, A. A. Descriptiones *Hymenopterorum* chalcidoidicorum cum observationibus. iv. Entomol. London **50** 1917 (36–38). **558**

Girault, A. A. Notes on some parasites of sugar-cane insects in Java. Entomologist London **50** 1917 (134, 135). [*Hymenoptera.*] **559**

Girault, A. A. A new *Embidobia* from India. Entomologist London **50** 1917 (152). [*Hymenoptera.*] **560**

Glaser, R. W. The growth of insect blood cells in vitro. Psyche Boston **24** 1917 (1–7) pl. i. **561**

Glaser, R. W. Anthocyanin in *Pterocomma smithiae.* Psyche Boston **24** 1918 (30). [*Homoptera.*] **562**

Goldschmidt, R. On a case of facultative parthenogenesis in the gypsy-moth, *Lymantria dispar* L. With a discussion of the relation of parthenogenesis to sex. Biol. Bull. Woods Hole **32** 1917 (35–43). [*Lepidoptera.*] **563**

Good, C. A. *vide* Brittain and Good.

Goot, P. van der. Notes on some indian Aphides. Rec. Ind. Mus. Calcutta **13** 1917 (175–183). **564**

Goot, P. **van der.** De zwarte cacaomier. (Dolichoderus bituberculatus Mayr) [Die schwarze Cacao-Ameise (*Dolichoderus bituberculatus* Mayr.] Salatiga Meded. Proofstat. Midden Java No. **25** 1917 (1–142), 2 Taf. [*Hymenoptera.*] **565**

Goot, P. **van der.** Zur Kenntniss der Blattläuse Javas. Buitenzorg Contrib. faune Indes Néerl. **1** Fasc. 3 1917 (1–301) 52 Textfig. [*Homoptera.*] **566**

Gordon, R. S. A list of the *Macrolepidoptera* of Wigtownshire. Tr. Dumfriesshire Soc. 1912–13 1913 (168–188). **567**

Gough, L. Notes on the egyptian honey-bee. Bull. Soc. ent. Egypte **9** 1916 (25–32). [*Hymenoptera.*] **568**

Gough, L. On the rate of increase of *Gelechia gossypiella* larvae in green boles during 1916. Bull. Soc. ent. Egypte **9** 1917 (113–115) chart. [*Lepidoptera.*] **569**

Gough, L. H. *vide* Dudgeon and Gough.

Gouin, H. Catalogue raisonné des *Microlépidotères* observés en Gironde jusqu'en 1915 par François Robert Fenwick Brown (suite). Actes Soc. Linn. Bordeaux **69** 1916. (360–417). **570**

Gowdey, C. C. A list of Uganda Coccidae, their food-plants and natural enemies. Bull. ent. Res. London **8** 1917 (187–189). [*Homoptera.*] **571**

Grandi, G. Contributo alla conoscenza degli Agaonini dell'Eritrea e dell'Uganda. Bull. Soc. ent. ital. Firenze **48** 1917 (3–42). [*Hymenoptera.*] **572**

Grandi, G. Contributo alla conoscenza degli Agaonini di Giava. Boll. Lab. Portici **12** 1917 (3–60). [*Hymenoptera.*] **573**

Grave, H. B. *Zeugophora scutellaris* (Suffr.). J. Morphol. Philadelphia **30** 1917 (245–253) 2 pls. [*Coleoptera.*] **574**

Graves, P. A list of the butterflies of Egypt with some notes on those of Sinai. Bull. Soc. ent. Egypte **7** 1916 (135–157). [*Lepidoptera.*] **575**

Gray, R. A. H. Notes on a plague of psocids in a factory. Ann. Appl. Biol. Cambridge **4** 1917 (47–49). [*Psocoptera.*] **576**

Green, E. E. Observations on british Coccidae; with descriptions of new species. No. iii. Ent. Mo. Mag. London **53** 1917 (201–210). [*Homoptera.*] **577**

Green, E. E. Observations on british Coccidae, with descriptions of new species. iv. Ent. Mo. Mag. London **53** 1917 (260–269). [*Homoptera.*] **578**

Green, E. E. A list of Coccidae affecting various genera of plants. Ann. appl. Biol. Cambridge **4** 1917 (75–89). [*Homoptera.*] **579**

Green, J. W. A new *Trichodes.* Ent. News Philadelphia **28** 1917 (367). [*Coleoptera.*] **579a**

Gregory, Louise H. The effect of starvation on the wing development of *Microsiphum destructor.* Biol. Bull. Woods Hole **33** 1917 (296–303.) [*Homoptera.*] **580**

Griffini, A. Le specie orientali del gen. *Neanias* Brunner. Wien. ent. Zeit. Wien **33** 1914 (235–251). [*Orthoptera.*] **580a**

Grimshaw, P. H. The british lice (Anoplura) and their hosts. Scott. Natural. Edinburgh **1917** 1917 (13–17, 65–68). [*Ellipoptera.*] **581**

Grimshaw, P. H. A guide to the literature of british *Diptera.* Edinburgh Proc. Phys. Soc. **20** 1917 (78–117). **582**

Grinnell, Fordyce, *jun.* Butterfly records. Lorquinia Los Angeles Cal. **1** 1916 (5). [*Lépidoptera.*] **582a**

Groenewege, J. Bestryding van insectenplagen van het suikerriet door schimmels en bacteriën. [Bekämpfung von Insektenplagen des Zuckerrohrs durch Pilze und Bakterien.] Arch. Suikerind. Ned. Ind. Soerabaia **24** 1916 (2023–2033). **583**

Grossbeck, J. A. Insects of Florida. iv. *Lepidoptera,* Edited by Frank E. Watson. Bull. Amer. Mus. New York **37** 1917 (1–147). **583a**

Grossenbacher, J. G. Medullary spots and their cause. New York Bull. Torrey Bot. Cl. **42** 1915 (227–239) pl. x. [*Diptera.*] **583b**

Grouvelle, A. Clavicornia et Dermestidae. Nova Guinea. Résultats de l'expédition scientifique néerlandaise à la Nouvelle Guinée en 1903 sous les auspices de Arthur Wichmann. Leide (E. J. Brill) **5** livr. VI., 1917 (565). [*Coleoptera.*] **584**

Grouvelle, A. Nitidulidae (*Coléoptères*) des îles Philippines récoltés par C. F. Baker. ii. Philippine J. Sci. D. **12** 1917 (329–344). **585**

Grouvelle, A. Clavicornes du Musée du Congo. ii. Rev. zool. afric. Bruxelles **4** 1914 (129–141). [*Coleoptera.*] **586**

Grouvelle, A. Description d'un *Derodontus* nouveau d'Italie. Bull. Soc. ent. France **1916** 1917 (296). [*Coleoptera.*] **587**

Grouvelle, A. Description d'un *Axyra* de Dahomey. Bull. Soc. ent. France **1917** 1917 (107). [*Coleoptera.*] **588**

Grouvelle, A. Description d'un *Loberus* nouveau de Nouvelle Calédonie. Bull. Soc. ent. France **1917** 1917 (122). [*Coleoptera.*] **589**

Grouvelle, A. Description d'un *Litargus* nouveau d'Afrique. Bull. soc. ent. France **1916** 1917 (278). [*Coleoptera.*] **590**

Grünberg, K. Lycaenidae part. Seitz Fauna exot. Indo-austral. **9** pp. 824–848, 1915 and 1916. [*Lepidoptera.*] **590a**

Güssow, H. T. *Empusa muscae* versus *Musca domestica* L. Ann. appl. Biol. Cambridge **3** 1917 (150–158) pl. xxi. [*Diptera.*] **591**

Guitel, F. Entomologie économique. Insecta Rennes **7** 1917 (36–49). **592**

Guthrie, Esther. New Mycetophilidae from California. Ann. ent. Soc. Amer. Columbus **10** 1917 (314–322) pls. xxv–xxvii. [*Diptera.*] **593**

Guyénot, E. Recherches expérimentales sur la vie aseptique et le développement d'un organisme (*Drosophila ampelophila*) en fonction du milieu. Bull. biol. France Belgique **51** 1917 (1–330) pls. i–iv. [*Diptera.*] **594**

Hacker, H. P. *vide* Stanton and Hacker.

Hagan, H. R. Observations on the embryonic development of the mantid *Paratenodera sinensis.* J. Morphol. Philadelphia **30** 1917 (223–244) 3 pls. [*Orthoptera.*] **595**

Hall, A. New butterflies of the family Nymphalidae. Entomologist London **50** 1917 (161–163, 171–174). [*Lepidoptera.*] **596**

Hallett, H. M. The *Hemiptera* of Glamorgan. Trans. Cardiff Nat. Soc. **49** 1916 (52–63). **597**

Hallett, H. M. Entomological notes. Trans. Cardiff Nat. Soc. **49** 1916 (64–66). **598**

Hamfeldt, B. Kleinschmetterlinge aus den Färöern. Ark. Zool. Stockholm **10** No. 25 1917 (9) 3 text figs. [*Lepidoptera.*] **599**

Hamilton, C. C. The behavior of some soil insects in gradients of evaporating power of air, carbon dioxide and ammonia Biol. Bull. Woods Hole **32** 1917 (159–182). **600**

Hammond, L. F. Notes on *Malacosoma neustria* from Anzac cove. Proc. Trans. Croydon Nat. hist. Soc. **8** 1917 (133–135). [*Hymenoptera.*] **601**

Hampson, *Sir* G. F. The determination of generic types in the *Lepidoptera.* Ent. News Philadelphia **28** 1917 (463–467). **602**

Hampson, *Sir* G. F. Descriptions of new Pyralidae of the subfamilies Epipaschianae, Chrysauginae, Endotrichinae and Pyralinaé (continued). Ann. Nat. Hist. London **19** 1917 (65–100). [*Lepidoptera.*] **603**

Hampson, *Sir* G. F. Descriptions of new Pyralidae of the sub-families Hydrocampinae, Scoparianae etc. Ann. Nat. hist. London **19** 1917 (361–376 457–472) and **20** 1917 (201–216, 265–282). [*Lepidoptera.*] **604**

Hampson, *Sir* G. F. Descriptions of new Pyralidae of the subfamily Pyraustinae. Ann. Nat. Hist. London **20** 1917 (369–384). [*Lepidoptera.*] **605**

Hampson, *Sir* G. F. A classification of the Pyralidae, subfamily Gallerianae. Novit. zool. Tring **24** 1917 (17–58). [*Lepidoptera.*] **606**

Hance, R. T. The somatic mitoses of the mosquito *Culex pipiens.* J. Morphol. Philadelphia **28** 1917 (579–588) 2 pls. [*Diptera*]. **607**

Hansen, H. J. On the Trichobothria ("Auditory hairs") in *Arachnida, Myriopoda* and *Insecta,* with a summary of the external sensory organs in *Arachnida.* Ent. Tidskr. Uppsala **38** 1917 (240–259). **608**

Hansen, V. Three new Rhynchophora from Denmark. Ent. Meddel. Kjøbenhavn **11** 1917 (351–355). [*Coleoptera.*] **609**

Hansen, V. Notes on some weevils. Ent. Meddel. Kjøbenhavn **11** 1917 (356–358). [*Coleoptera.*] **610**

Hardenberg, C. B. South African Bagworms: their transformations, life-history and economic importance. Ann. Natal. Mus. 3 1917 (619–686) pls. xliv–xlvi. [*Lepidoptera.*] **611**

Harrison, J. W. H. A new species and genus of Aleurodidae from Durham. Vasculum, Hexham **3** 1917 (60–62). [*Homoptera.*] **612**

Harrison, J. W. H. The geographical distribution of the moths of the subfamily Bistoninae. Naturalist **1917** 1917 (161–164, 252–257, 293, 312). [*Lepidoptera.*] **613**

Harrison, J. W. H. Studies in the hybrid Bistoninae. J. Genetics Cambridge **6** 1917 (269–313) pl. x. [*Lepidoptera.*] **613a**

Harrison, J. W. H. *Vespa austriaca* Vasculum Hexham **1** 1915 (113–115). [*Hymenoptera.*] **614**

Harrison, J. W. H. New and rare *Homoptera* in the northern counties. Entomologist London **50** 1917 (169, 170). **615**

Harrison, J. W. H. *Baldratia salicorniae* (Kieffer) and *Stefaniella brevipalpis* (Kieffer), two Cecidomyidae new to the british fauna, with references to other insects. Entomologist London **50** 1917 (244, 245). [*Diptera.*] **616**

Harrison, J. W. H. *vide* Bagnall and Harrison.

Harukawa, C. and **Yagi,** M. Über die Lebensweise des Pfirsichtriebbohrers, *Laspereysia molesta* Busck. Ber. Ohara Inst., Kuraschiki Japan **1** 1917 (151–170) 2 pls. [*Lepidoptera.*] **617**

Haseman, L. *Sarcophaga haemorrhoidalis* larvae as parasites of the human intestine. Ent. News Philadelphia **28** 1917 (343–346). [*Diptera.*] **618**

Hawkes, *Mrs.* O. A. M. The effect of moisture upon the silk of the hybrid *Philosamia* (*Attacus*) *ricini* Bois. ♂ × *Philosamia cynthia* Drury ♀. J. exp. Zool. **21** 1916 (51–60). [*Lepidoptera.*] **619**

Hawkes, *Mrs.* O. A. M. On the factors which determine the cocoon colour of *Plusia moneta* and other *Lepidoptera.* Tr. ent. Soc. London **1916** 1917 (404–411). **620**

Hayes, W. P. Studies on the life-history of *Ligyrus gibbosus* De G. J. econ. Ent. Concord **10** 1917 (253–261) pl. xii. [*Coleoptera.*] **621**

Headlee, T. J. Some facts relative to the influence of atmospheric humidity on insect metabolism. J. econ. Ent. Concord **10** 1917 (31–38). **622**

Headlee, T. J. The mosquitoes of New Jersey and their control. Agric. Exp. Sta. New Jersey New Brunswick Bull. No. **276** 1915 (1–135) ff. 1–94. [*Diptera.*] **622a**

Headlee, T. J. and **Beckwith,** C. S. Some recent advances in mosquito work. Ann. ent. Soc. Amer. **10** 1917 (211–218). [*Diptera.*] **623**

Hebard, M. The Blattidae of North-america north of the mexican boundary. Mem. Amer. ent. Soc. **2** 1917 (1–284) 10 pls. [*Orthoptera.*] **624**

Hebard, M. Dermapterological notes. Philadelphia P. Acad. Sci. **69** 1917 (231–250) pl. xvi. [*Orthoptera.*] **625**

Hebard, M. Notes on mexican Melanopli. Philadelphia P. Acad. **1917** 1917 (251–275). [*Orthoptera.*] **626**

Hebard, M. Notes on the earwigs (*Dermaptera*) of North America, north of the mexican boundary. Ent. News Philadelphia **28** 1917 (311–323). [*Orthoptera.*] **627**

Hebard, M. A new species of myrmecophilous Blattidae. Ent. News Philadelphia **28** 1917 (360–362). [*Orthoptera.*] **628**

Hebard, M. *vide* Rehn and Hebard.

Hegner, R. W. The genesis of the organization of the insect egg. i and ii. Amer. Nat. New York **51** 1917 (641–661 705–718). **629**

Heidemann, O. Two new species of lace-bugs. Washington D.C. Proc. ent. Soc. **18** 1917 (217–219) pl. xvii. [*Heteroptera.*] **630**

Heikertinger, F. Entomologische Tagesfragen. Wien. ent. Zeit. **33** 1914 (253–258). **630a**

Heinrich, C. On the taxonomic value of some larval characters in the *Lepidoptera.* Washington D.C. Proc. ent. Soc. **18** 1916 (154–164) pl. **631**

Heller, K. M. Eine neue aberrante Eustrophinen-Gattung. (*Coleoptera*: Melandryidae). 's Gravenhage Tydschr. Ent. **60** 1917 1918 (376–381). **632**

Heller, K. M. Ueber *Nigidius*-Arten von Formosa und den Philippinen. Ent. Mitt. Berlin **6** 1917 (170–174). [*Coleoptera.*] **633**

Herrera, M. Insectos homocromicos y mimeticos mexicanos. Bol. Est. Biol. Mexico **2** 1917 (83–91) pls. i–vii. **634**

Hervé-Bazin, J. Contribution à l'étude des syrphides de Madasascar. Rev. Zool. afric. Bruxelles **4** 1914 (101–108) pl. vi. [*Diptera.*] **635**

Hess, W. N. The chordotonal organs and pleural discs of Cerambycid larvae. Ann. ent. Soc. Amer. Columbus **10** 1917 (63–74) pls. v–vii. [*Coleoptera.*] **636**

Hess, W. N. Origin and development of the photogenic organs of *Photuris pennsylvanica* de Geer. Ent. News **28** 1917 (304–310). [*Coleoptera.*] **637**

Hewitt, C. G. Insect behaviour as a factor in applied entomology. J. econ. Ent. **10** 1917 (81–91). **638**

Hewitt, C. G. Report of the Dominion entomologist for the year ending March 31st, 1916. Canada Dep. Agric. Ottawa 1917 (72 pp.) 4 pls. **639**

Hewitt, C. G. Report of the Dominion entomologist for the year ending March 31st, 1917. Canada Dep. Agric. Ottawa 1917 (24 pp.). **640**

Hewitt, C. G. The introduction into Canada of the ichneumon-fly, *Mesoleius tenthredinis*. Agric. Gaz. Canada **4** 1917 (355–357). [*Hymenoptera.*] **641**

Heyden, H. N. **van der** *vide* Schüffner, W.

Hill, G. F. Some notes on the bionomics of the buffalo-fly (*Lyperosia exigua* de Meijere). Sydney P. Linn. Soc. N.S.W. **41** 1917 (763–768) pl. liii. [*Diptera.*] **642**

Hilton, W. A. The nervous system of *Thysanura*. Ann. ent. Soc. Amer. Columbus **10** 1917 (303–313). [*Aptera.*] **643**

Hindle, E. Notes on the biology of *Pediculus humanus*. Parasitology Cambridge **9** 1917 (259–265). [*Ellipoptera.*] **644**

Hine, J. S. Descriptions of north-american Tabanidae. Ohio J. Sci. **17** 1917 (269–271). [*Diptera.*] **645**

Hodgson, T. V. Parasitic *Hymenoptera;* Ichneumonidae and Braconidae. Type species in the Bignell collection. Rep. Trans. Devon. Ass. **49** 1917 (397–415). **646**

Hoffmeyer, S. Macrolepidopterer og *Phragmites communis*. *Macrolepidoptera* caught on *Phragmites communis* in Danish bogs. København Ent. Medd. **11** 1916 (6–15). **647**

Holland, W. J. Two new west-african Rhopalocera. Ann. Carnegie Mus. **11** 1917 (14–18) pl. iv. [*Lepidoptera.*] **648**

Holland, W. J. List of the *Hymenoptera* collected on the Isle of pines by G. A. Link, S.R., 1912–1913, and contained in the Carnegie Museum. Ann. Carnegie Mus **11** 1917 (291–296). **649**

Hollinger, A. H. Taxonomic value of antennal segments of certain Coccidae. Ann. ent. Soc. Amer. Columbus **10** 1917 (264–271) pls. xix–xxii. [*Homoptera.*] **650**

Hollinger, A. H. A new species of *Phenacoccus*. Canad. Entom. London Can. **49** 1917 (281–284). [*Homoptera.*] **651**

Holmberg, E. L. Un caso de mimetismo en las abejas. Physis Buenos Aires **3** 1917 (234–237). [*Hymenoptera.*] **652**

Holmgren, N. Zur vergleichenden Anatomie des Gehirns von Polychaeten, Onychophoren, Xiphasuren, Arachniden, Crustaceen, Myriopoden und Insekten. Vorstudien zu einer Phylogenie der Arthropoden. Stockholm Vet.-Ak. Handl. **56** No. 1 1916 (303) 12 pls. 54 text figs. **653**

Holt, Caroline M. Multiple complexes in the alimentary tract of *Culex pipiens*. J. Morphol. Philadelphia **29** 1917 (607–617) 4 pls. [*Diptera.*] **654**

Honda, S. *vide* Aoki, K.

Honeij, J. A. and **Parker,** R. R. Leprosy: Flies in relation to the transmission of the disease (A preliminary note.) J. Med. Res. Boston **30** (N. Ser. **25**) 1914 (127–130). [*Diptera.*] **655**

Hood, J. D. An annotated list of the *Thysanoptera* of Plummer's island, Maryland. Insec. inscit. Washington **5** 1917 (53–65). **656**

Horton, J. R. Three-lined fig-tree borer. J. Agric. Res. **11** 1917 (371–382) pls. xxxv–xxxvii. [*Coleoptera.*] **657**

Horvath, G. Description d'une nouvelle cigale d'Egypte. Bull. Soc. ent. Egypte Le Caire **7** 1916 (6–9). [*Homoptera.*] **658**

Houard, C. Cécidies normandes. Bull. Soc. linn. Normandie **6** 1913 (102–121) pl. ii. **659**

Houlbert, C. Diagnoses de Castnies nouvelles et rectification de quelques noms indûment employes. [*In:* **Oberthur**] Ét. Lép. comp. **13** 1917 (49–85) 4 pls. [*Lepidoptera.*] **660**

Howard, C. W. Insect transmission of infectious anaemia of horses. J. Parasitol. Urbana Illinois **4** 1917 (70–79). [*Diptera.*] **661**

Howard, L. O., **Dyar,** H. G. and **Knab,** F. The mosquitoes of North and Central America and the West Indies. Vol. 3. Systematic description (in two parts). Part 1. Washington (Carnegie Inst. Pub. No. **159** Vol. 3) 1915 (vi + 523). 25 cm. **661a**

Howard, L. O., **Dyar,** H. G., **Knab,** F. The mosquitoes of North and Central America and the West Indies. Vol. 3. Part 2. Washington 1917 (525–1064). [*Diptera.*] **662**

Howard, N. F. *vide* Chitterden and Howard.

Howe, R. H. Distributional notes on new England Odonata. Psyche Boston **24** 1917 (45–53.) [*Paraneuroptera.*] **663**

Howes, W. G. New *Lepidoptera.* Tr. New Zealand Inst. Wellington **49** (274). **664**

Howlett, F. M. Notes on head- and body-lice and upon temperature reactions of lice and mosquitoes. Parasitology Cambridge **10** 1917 (186 etc.). [*Ellipoptera.*] **665**

Huguenin, J. C. A new *Catocola* net. Ent. News Philadelphia **28** 1917 (71 and 72) figs. **666**

Huie, *Miss* L. H. Some notes on the microscopical preparation of insects. Scott. Natural. Edinburgh **1917** 1917 (219–229). **667**

Huie, *Miss* L. H. *Eudemis naevana* Hb., the holly tortrix moth. Proc. R. Phys. Soc. Edinburgh **20** 1917 (164–178) pl. xii. [*Lepidoptera.*] **668**

Hungerford, H. B. Notes concerning the food supply of some water bugs. Science New York **45** 1917 (336). [*Heteroptera.*] **669**

Hungerford, H. B. The life history of *Mesovelia mulsanti* White. Psyche Boston **24** 1917 (73–84) pl. iv. [*Heteroptera.*] **670**

Hungerford, H. B. Food habits of Corixids. J. New York ent. Soc. **25** 1917 (1–5) pl. i. [*Heteroptera.*] **671**

Hungerford, H. G. Life history of a boatman. J. N. York ent. Soc. **25** 1917 (112–122) pl. ix. [*Heteroptera.*] **672**

Hungerford, H. B. The egg laying habits of a back-swimmer. Ent. News Philadelphia **28** 1917 (174–182) pl. xiii. [*Heteroptera.*] **673**

Hungerford, H. B. The life history of the back-swimmer *Notonecta undulata* Say. Ent. News Philadelphia **28** 1917 (267–277) pls. xix and xx. [*Heteroptera.*] **674**

Hungerford, H. B. *Sciara* maggots injurious to potted plants. J. Econ. Ent. Concord N. H. **9** 1916 (538–549) pls. 41 42. [*Diptera.*] **674a**

Hustache, A. Description d'un nouveau *Ceuthorrhynchus* de la faune française. Bull. Soc. ent. France **1916** 1917 (232). [*Coleoptera.*] **675**

Hustache, A. Synopsis du genre *Stigmatrachelus* Schoenh. et autres genres malgaches du même groupe. Ann. Soc. ent. France **86** 1917 (193–266). [*Coleoptera.*] **676**

Hutchison, R. H. Notes on the larvae of *Euxesta notata* Wied. Washington D.C. Proc. ent. Soc. **18** 1916 (171–177) pl. xii. [*Diptera.*] **677**

Hutchison, H. H. *vide* Webb and Hutchison.

Hyde, R. R. Fertility and sterility in *Drosophila ampelophila.* 1. Sterility in *Drosophila* with special reference to a defect in the female and its behavior in heredity. J. Exp. Zool. Philadelphia **17** 1914 (141–171). [*Diptera.*] **678**

Hyde, R. R. Fertility and sterility in *Drosophila ampelophila.* 2. Fertility in *Drosophila* and its behavior in heredity. J. Exp. Zool. Philadelphia **17** 1914 (173–212) figs. [*Diptera.*] **679**

Hyde, R. R. Fertility and sterility in *Drosophila ampelophila.* 3. Effects of crossing on fertility in *Drosophila.* J. Exp. Zool. Philadelphia **17** 1914 (343–372). [*Diptera.*] **680**

Hyslop, J. A. The phylogeny of the Elateridae based on larval characters. Ann. ent. Soc. Amer. Columbus **10** 1917 (241–263). [*Coleoptera.*] **681**

Hyslop, J. A. Notes on an introduced weevil (*Ceuthorhynchus marginatus* Payk.). J. econ. Ent. Concord **10** 1917 (278–282). [*Coleoptera.*] **682**

Hyslop, J. A. *Pristocera armifera* (Say) parasitic on *Limonius agonus* (Say). Washington D.C. Proc. ent. Soc. **18** 1916 (169–170) pl. xi. [*Hymenoptera.*] **683**

Hyslop, J. A. *Triphleps insidiosus* as the probable transmittor of corn-ear rot (*Diplodia* sp., *Fusarium* sp.). J. Econ. Ent. Concord N. H. **9** 1916 (435–438). [*Heteroptera.*] **683a**

Ihering, R. von. Observações sobre a mariposa *Myelobia smerinthæ.* Hübner em São Paulo. Physis Buenos Aires **3** 1917 (60–68). [*Lepidoptera.*] **684**

Ihering, H. von. As formigas cuaybanas empregadas como meio de destrucção das formigas cortadeiras. Physis Buenos Aires **3** 1917 (352–360). [*Hymenoptera.*] **685**

Ikeda, Y. and **Inouye,** Y. Sangino keitaijo ni okeru shiyu kanbetsu no shinpo. [On the determination of sexes of silkworms by their external characters.] Tokyo Ni. Sanshi Kw. Ho. **1917** (630–637). [*Lepidoptera.*] **686**

Illingworth, J. H. Regeneration in cockroaches. P. Hawai. ent. Soc. **3** 1917 (266). [*Orthoptera.*] **687**

Illingworth, J. F. Notes on two species of hawaiian *Diptera.* Proc. Hawai. ent. Soc. **3** 1917 (270–272). **688**

Illingworth, F. J. Economic aspects of our predaceous ant (*Pheidole megacephala*). Proc. Hawai. ent. Soc. **3** 1917 (349–368). [*Hymenoptera.*] **689**

Imms, A. D. Remarks on the biology of *Chareas graminis* L. Ent. Mo. Mag. London **53** 1917 (178 & 179). [*Lepidoptera.*] **690**

Ingram, A. and **Maffie,** J. W. S. Notes on some distinctive points in the pupae of west african mosquitoes. Bull. ent. Res. London **8** 1917 (73–91). [*Diptera.*] **691**

Ingram, A. and **Maffie,** J. W. S. The early stages of certain west african mosquitos. Bull. ent. Res. London **8** 1917 (135–154) pls. i–iv. [*Diptera.*] **692**

Innes *Bey,* W. Révision des *Orthopeteres* de l'Egypte i. Forficulides, Blattides, Mantides. Mem. Soc. ent. Egypte **1** fasc. 3 1912 (1–78) 4 pls. **693**

Innes *Bey,* W. Les Blaps d'Egypte. Bull. Soc. ent. Egypte Le Caire **7** 1916 (10–44). [*Coleoptera.*] **694**

Innes *Bey,* W. Les Adesmies égyptiennes d'après la classification d'Ernest Allard. Bull. Soc. ent. Egypte **10** 1917 (51–68). [*Coleoptera.*] **695**

Inouye, Y. *vide* Ikeda, Y.

Isely, D. Control of the grape-berry moth in the Erie-Chautauqua grape belt. Bull. U.S. Dep. Agric. Ent. **553** 1917 (42 pp.) 6. pls. [*Lepidoptera.*] **696**

Isely, D. Orchard injury by the hickory tiger moth. Bull. U.S. Dep. Agric. Ent. **598** 1917 (14 pp.) 3 pls. [*Lepidoptera.*] **697**

Ishizuka, Y. Kasan no yeiyo ni kwansuru kenkyu. [On the researches of the nourishment of silkworms.] Tokyo, Sangyo Shikenjo Hokoku [Report of the Sericultural Institute] 1917 (353–412). [*Lepidoptera.*] **698**

Jack, R. W. Parthenogenesis amongst the workers of the Cape honey-bee. Tr. ent. Soc. London **1916** 1917 (396–403) pls. cv, cvi [*Hymenoptera.*] **699**

Jack, R. W. Natural transmission of trypanosomiasis (*T. pecorum* group) in the absence of tsetse-fly. Bull. ent. Res. London **8** 1917 (35–41.) [*Diptera.*] **700**

Jack, R. W. Notes on the larvae etc., of some Rhodesian Tenebrionidae. S. Afric. J. Nat. Hist. Pretoria **1** 1917 (84–98) pls. iv–vi. [*Coleoptera.*] **701**

Jackson, A. C. and **Lefroy,** H.M. Some fly poisons for outdoor and hospital use. Bull. ent. Res. London **7** 1917 (327–335). [*Diptera.*] **702**

Jacobsen, O. Nye Taeger siden 1912. A catalogue of *Heteroptera,* new for the Danish fauna, observed since the year 1912. København, Flora og Fauna **1917** (54–57). **703**

Janse, A. J. T. Check-List of the South African *Lepidoptera* Heterocera (219 + xii). Issued by the Transvaal Museum. Pretoria 1917. **704**

Janse, A. J. T. Description of an apparently undescribed moth of the family Lymantriadae (*Lepidoptera*). Ann. S. Afric. Mus. **17** 1917 (185). **705**

Janse, A. J. T. South African Bag worms; Note on the Psychidae and on the genera Gymnelema and Trichocossus, with descriptions of five new species. Ann. Natal. Mus. **3** (587–614) pl. xliii. [*Lepidoptera.*] **706**

Janse, A. J. T. Some apparently undescribed South African Heterocera. Ann. Durb. Mus. Durban 1917 (469–477). [*Lepidoptera.*] **707**

Janse, A. J. T. How to collect, preserve, and study *Lepidopterous* insects in South Africa. S. Afric. J. Nat. hist. Pretoria **1** 1917 (35–49) pl. ii. **708**

Janson, O. E. Additions to the knowledge of the Cetoniidae of British India. Trans. ent. Soc. London **1917** 1917 (102–111). [*Coleoptera.*] **709**

Janson, O. E. Descriptions of two new species of Cetoniidae. Ent. Mo. Mag. London **53** 1917 (5 and 6). [*Coleoptera.*] **710**

Jeannel, R. Deux nouveaux *Trechus* cavernicoles de France et d'Espagne. Bull. Soc. ent. France **1916** 1917 (280–283). [*Coleoptera.*] **711**

Jeannel, R. Diagnoses préliminaires de Reduviidae nouveaux d'Afrique. Première note. Bull. Soc. ent. France **1916** 1917 (300–304). [*Heteroptera.*] **712**

Jeannel, R. Trois nouveaux *Aphaenops* des Pyrénées. Bull. Soc. ent. France **1916** 1917 (312–315). [*Coleoptera.*] **713**

Jeannel, R. Diagnoses préliminaires de Reduviidae nouveaux d'Afrique. Deuxième note. Bull. Soc. ent. France **1917** 1917 (49–53). [*Heteroptera.*] **714**

Jennings, A. H. Summary of two years' study of insects in relation to pellagra. J. Parasitol. Urbana **1** 1914 (10–21). **715**

Jensen-Haarup, A. C. Some new Delphacinae from Denmark. København Ent. Medd. **11** 1916 (1–5) 3 figs. [*Homoptera.*] **716**

Jensen-Haarup, W. C. Yngelpleje hos en Taege. On the parental care of *Elasmostethus griseus.* Köbenhavn Flora og Fauna **1916** (124–126). [*Heteroptera.*] **717**

Jensen-Haarup, A. C. Danmarks Cikader. (fortsat). Flora og Fauna København **1917** 1917 (41–48 65–72). [*Homoptera.*] **718**

Jensen-Haarup, A. C. Brutpflege bei einer Wanze (*Elasmostethus griseus* L.). Ent. Mitt. Berlin **6** 1917 (187). [*Heteroptera.*] **719**

Joannis, J. de. Note sur *Deuterotinea paradoxella* Stgr. Bull. Soc. ent. France **1917** 1917 (259–262). [*Lepidoptera.*] **720**

Jørgensen, L. Fortegnelse over Lolland-Falsters Vaabenfluer (Stratiomyiidae). The Stratiomyidae of Lolland-Falster (Denmark). København, Flora og Fauna **1917** (13). [*Diptera.*] **721**

Jørgensen, L. Humlebierne (*Bombus*). Flora og Fauna København **1917** 1917 (30–32). [*Hymenoptera.*] **722**

Jörgensen, P. Zoocecidios argentinos. Physis Buenos Aires **3** 1917 (1–29 3 pls.). **723**

Johannsen, O. A. Some North American Anthomyiidae. Ent. News Philadelphia **28** 1917 (323–327). [*Diptera.*] **724**

Johnson, C. W. A new species of *Cricrhina* from New England. Psyche Boston **24** 1917 (153). [*Diptera.*] **725**

Johnson, C. W. A new maritime Anthomyid. Canad. Entom. London Can. **49** 1917 (158). [*Diptera.*] **726**

Johnson, C. W. Species of the genus *Brachyopa* of the eastern United States. Canad. Entom. London Can. **49** 1917 (360–362). [*Diptera.*] **727**

Johnson, W. F. *Lissonota basalis* Brischke in Ireland. Irish Nat. Dublin **27** 1917 (82). [*Hymenoptera.*] **728**

Joicey, J. J. and **Kaye,** W. J. On a collection of heliconine forms from French Guiana. Tr. ent. Soc. London **1916** 1917 (412–431) pls. cvii, cviii [*Lepidoptera.*] **729**

Joicey, J. J. and **Kaye,** W. J. New races and aberrations of *Heliconius.* Ann. Nat. Hist. London **20** 1917 (87–94) pls. v and vi. [*Lepidoptera.*] **730**

Joicey, J. J. and **Kaye,** W. J. Two new species and new genus of Sphingidae. Ann. Nat. Hist. London **20** 1917 (230, 231) pl. viii. [*Lepidoptera.*] **731**

Joicey, J. J. and **Kaye,** W. J. New species and forms of Sphingidae. Ann. Nat. Hist. London **20** 1917 (305–309). [*Lepidoptera.*] **732**

Joicey, J. J. and **Kaye,** W. J. New subspecies of *Caligo.* Ent. Rec. London **29** 1917 (180 and 181). [*Lepidoptera.*] **733**

Joicey, J. J. and **Talbot,** G. New Heterocera from Dutch New Guinea. Ann. Nat. Hist. London **20** 1917 (50–87) pls. i-iv. [*Lepidoptera.*] **734**

Joicey, J. J. and Talbot, G. New *Lepidoptera* from Waigeu, Dutch New Guinea and Biak. Ann. Nat. Hist. London **20** 1917 (216–229). **735**

Jones, C. R. New species of Colorado *Syrphidæ*. Ann. ent. Soc. Amer. Columbus **10** 1917 (219–231). [*Diptera.*] **736**

Jones, C. R. *vide* Barber, M. A.

Jones, D. W. The European earwig and its control. Bull. U.S. Dep. Agric. ent. Washington **566** 1917 (12 pp.). [*Orthoptera.*] **737**

Jones, T. H. The sweet-potato leaf-folder. Bull. U.S. Dep. Agric. Ent. **609** 1917 (12 pp.). [*Lepidoptera.*] **738**

Jones, T. H. Notes on *Anasa andresii* Guér. an enemy of cucurbits. J. Econ. Ent. Concord, N.H. **9** 1916 (431–334). [*Heteroptera.*] **738a**

Jordan, K. Two new American moths. Novit. Zool. Tring **24** 1917 (49). [*Lepidoptera.*] **739**

Kawase, S. Kasan no haisetsubutsu ni kwansuru kenkyu. [On the excretory products of silkworms.] Tokyo Ni. Sanshi. Kw. Ho. **1917** (115–121 203–207). [*Lepidoptera.*] **740**

Kavase, S. and Matsuhari, T. Kasan no kokyu ni tsuite. [On the respiration of silkworms.] Tokyo, Ni Sanshi Kw. Ho. **1917** (986–996). [*Lepidoptera.*] **741**

Kaye, W. J. *vide* Joicey and Kaye.

Keilin, D. Recherches sur les Anthomyides a larves carnivores. Parasitol. Cambridge **9** 1917 (325–450) pls. v–xv. [*Diptera.*] **742**

Keilin, D. Sur quelques cas d'anomalie chez les *Diptères*. Bull. Soc. ent. France **1917** 1917 (193–196). **743**

Keilin, D. On the supposed first-stage larva of *Leptohylemyia coarctata*, Fall. Bull. ent. Res. London **8** 1917 (121–123). [*Diptera.*] **744**

Keller, C. Zur Biologie von *Chrysomela aerea* L. und *Coleophora fuscedinella* Zell. Vierteljahrschr. Ges. Zurich **62** 1917 (103–124) pl. iv. **745**

Kelly, A. E. *vide* Brain and Kelly.

Kennedy, C. H. Notes on the life history and ecology of the dragon flies (Odonata) of central California and Nevada. P.U.S. Nat. Mus. Washington **52** No. 2192 (483–635). [*Paraneuroptera.*] **746**

Kennedy, C. H. Notes on the penes of damselflies No. 2. The close relations inter se of the hawaiian Agrionines. Ent. News Philad. **28** 1917 (9–14) pls. ii and iii. [*Paraneuroptera.*] **747**

Kennedy, C. H. Notes on the penes of Zygoptera No. 3, the penes in *Neoneura* and related genera. Ent. News Philadelphia **28** 1917 (289–294) pls. xxi–xxiii. [*Paraneuroptera.*] **748**

Kennedy, C. H. A new species of *Somatochlora* with notes on the *cingulata* group. Canad. Entom. London Can. **49** 1917 (229–235). [*Paraneuroptera.*] **749**

Kenrick, *Sir* G. H. New or little-known Heterocera from Madagascar. Tr. ent. Soc. London **1917** 1917 (85–101) pls. i–vi. [*Lepidoptera.*] **750**

Kephart, Cornelia F. The poison glands of the larva of the brown-tail moth (*Euproctis chrysorrhoea* Linn.) [with bibliography.] J. Parasitol. Urbana Ill. **1** 1914 (95–103) ff. 1–4. [*Lepidoptera.*] **751**

Keuchenius, P. E. Anatomisch-histologische Untersuchungen über *Dipteren*. Holder Tydschr. Ned. Dierk. Ver. **16** (2) 1917 (1–52) 3 Taf. **752**

Kieffer, J. J. Ueber neue und bekannte *Microhymenopteren*. Ent. Meddel. Kjøbenhavn **11** 1917 (341–350). **753**

Kieffer, J. J. *vide* Masi.

Kinoshita, S. Honposan tobimushirui no ni shinshu. [On two new species of Aptera.] Dobuts. Z. Tokyo **29** 1917 (40–46). **754**

Kinoshita, S. Honposan tobimushirui no ni shinshu. [On two new species of Aptera.] Dobuts. Z. Tokyo **29** 1917 (73–76). **755**

Kisliuk, M. Some winter observations on muscid flies. Ohio J. Sci. Columbus **17** 1917 (285–294). [*Diptera.*] **756**

Kitajima, Y. and Tanita, S. Kasan no taion ni kwansuru kenkyu. [On the temperature of the silkworm's body.] Tokyo Ni. Sanshi Kw. Ho. **1917** (275–280, 392–396). [*Lepidoptera.*] **757**

Kitajima, Y. Tensan oyobi sakusan no kakeawase ni tsuite. [On the hybrids of *Antheraea yamamai* and *A. pernyi*.] Tokyo Ni. Sanshi Kw. Ho. **1917** (541–544). [*Lepidoptera.*] **758**

Kitayama, K. Karamatsu tsutsuminomushi ni tsuite. [On *Coleophora laricella*.] Konch. Sek. Gifu **21** 1917 (15–18). [*Lepidoptera.*] **759**

Klefbeck, E. *Limnophilus germanus* MacLachl. en för Sverige ny *Trichopter*. Ent. Tidskr. Uppsala **38** 1917 (325–326). **760**

Kleine, R. Ein neuer *Cyphagogus* aus Java. 's Gravenhage, Tydschr. Ent. **60** 1917 (177–180). [*Coleoptera.*] **761**

Kleine, R. Beiträge zur Kenntnis der *Amorphocephalus*-Verwandtschaft. Leiden Zool. Med. **3** 1917 (275–278). [*Coleoptera.*] **762**

Kleine, R. Neue *Miolispa* aus dem Leidener Museum. Leiden Zool. Med. **3** 1917 (289–294). [*Coleoptera.*] **763**

Kleine, R. *Systellus* n.g. ein neues Brenthidengenus mit neun Fühlergliedern. Ent. Mitt. Berlin **6** 1917 (174–178). [*Coleoptera.*] **764**

Kleine, R. Drei neue interessante Brenthiden-Gattungen des deutschen entomologischen Museums. Ent. Mitt. Berlin **6** 1917 (317–332). [*Coleoptera.*] **765**

Kløcker, A. Sommerfugle v. Natsommerfugle iv. (Danmarks Fauna 21). Danish Heterocera Part 4. København G. E. C. Gad, 1917 (78) 4 plates and 102 figg. 18½ × 12½ cm. Price Kr. 1,50. [*Lepidoptera.*] **766**

Knab, F. On some North-American species of *Microdon*. Proc. biol. Soc. Washington **30** 1917 (133–144). [*Diptera.*] **767**

Knab, F. A new Ortalid from the Philippines. Insec. inscit. Washington **5** 1917 (125 and 126). [*Diptera.*] **768**

Knab, F. Egg-disposal in *Dermatobia hominis*. Washington D.C. Proc. ent. Soc. **18** 1916 (179–184). [*Diptera.*] **769**

Knab, F. *vide* Howard, Dyar and Knab.

Knab, F. *vide* Dyar and Knab.

Knight, H. H. Records of European Miridae occurring in North America. Canad. Entom. London Can. **49** 1917 (248–251). [*Heteroptera.*] **770**

Knight, H. H. New and noteworthy forms of North American Miridae. Ent. News Philadelphia **28** 1917 (3–8). [*Heteroptera.*] **771**

Knight, H. H. New species of *Lopidea*. Ent. News Philadelphia **28** 1917 (455–461). [*Heteroptera.*] **772**

Koizumi, T. Taiwansan anopheleska ni tsuite. [On the Formosan *Anopheles*.] Dobuts. Z. Tokyo **29** 1917 (134–142). [*Diptera.*] **773**

Krogh, A. Injection preparation of the tracheal system of Insects. København Nath. Medd. **68** 1917 (319–322) 2 figs. **774**

Krüger, E. Zur Systematik der mitteleuropäischen Hummeln. Ent. Mitt. Berlin **6** 1917 (55–66). [*Hymenoptera.*] **775**

Kuwana, S. I. A check list of the Japanese Coccidae. Essays Nawae Yokohama 1917 (119 pp. [*Homoptera.*] **776**

Kuwana, I. Daizu no fukurokaigaramushi ni tsuite. [On *Eriococcus sojae* n. sp.] Konch. Sek. Gifu **21** 1917 (136–139). [*Homoptera.*] **777**

Laboissière, V. Description d'un *Luperus* nouveau du Maroc. Bull. Soc. ent. France **1917** 1917 (159). [*Coleoptera.*] **778**

Laboissière, V. Diagnoses de Galerucini nouveaux d'Afrique. Bull. Soc. ent. France **1917** 1918 (327–329). [*Coleoptera.*] **779**

Lacroix, J. L. Notes *néuroptérologiques*. Bol. Soc. Aragon **16** 1917 (183–188). **780**

Lacroix, J. Notes *néuroptérologiques* iv. Insecta Rennes **7** 1917 (18–24). **781**

Laidlaw, F. F. A list of the dragonflies recorded from the Indian empire, with special reference to the collection of the Indian Museum. Rec. Ind. Mus. Calcutta **13** 1917 (321–348) pls. xiii–xv. [*Paraneuroptera.*] **782**

Lamb, C. G. Falkland Islands *Diptera*. Tr. ent. Soc. London **1916** 1917 (387–395). **783**

Lamb, C. G. Notes on exotic *Chloropidae.* Ann. Nat. Hist. London **19** 1917 (33–58). [*Diptera.*] **784**

Lamb, C. G. Notes on exotic Helomyzidae, Sciomyzidae and Psilidae. Ann. Nat. Hist. London **19** 1917 (266–273). [*Diptera.*] **785**

Lambertie, M. Quelques Cécidies de la Gironde. Proc. verb. Soc. Linn. Bordeaux **69** 1917 (104, 105). **786**

Lameere, A. Sur les insectes houillers de Commentry. Bull. Soc. Zool. France **42** 1917 (27–37). **787**

Lameere, A. Etude sur l'évolution des Ephémères. Bull. Soc. Zool. France **42** 1917 (41–59) and seconde partie (61–81). [*Ephemeroptera.*] **788**

Lameere, A. Trois Prioninae nouveaux. Bull. Soc. ent. France **1916** 1917 (233–235). [*Coleoptera.*] **789**

Lameere, A. Note sur quelques Prioninae de Yunnan. Bull. Soc. ent. France **1916** 1917 (257–259). [*Coleoptera.*] **790**

Lameere, A. *Paleodictyoptères* et Subulicornes. Bull. Soc. ent. France **1917** (101–104). **791**

Lameere, A. Descriptions de deux nouveaux Prioninae. Bull. Soc. ent. France **1917** 1917 (146–148). [*Coleoptera.*] **792**

Lameere, A. Holométaboliques du houiller. Bull. Soc. ent. France **1917** 1917 (268–270). **793**

Larsen, C. S. Fortegnelse over Danmarks *Microlepidoptera.* Ent. Meddel. Kjøbenhavn **11** 1916 (28–319). **794**

Lathrop, F. H. A preliminary list of Cicadellidae (*Homoptera*) of South Carolina, with descriptions of new species. Ohio J. Sci. Columbus **17** 1917 (119–131). [*Homoptera.*] **795**

Lea, A. M. Descriptions of new species of Australian *Coleoptera.* Part xii. Sydney P. Linn. Soc. N.S.W. **41** 1917 (720–745). **796**

Lea, A. M. Some miscellaneous *Coleoptera.* Pt. 3. Adelaide S. Aust. Trans. R. Soc. **41** 1917 (121–322) 4 pls. **797**

Lea, A. M. South Australian museum expedition to Strzelecki and Cooper Creeks. Adelaide S. Aust. Trans. R. Soc. **41** 1917 (489–630) 5 pls. [*Coleoptera.*] **798**

Lécaillon, A. Sur la signification des changements de couleur qui se produisent normalement dans certains œufs non fécondés de *Bombyx mori* et sur la formation, dans cette espèce, de véritables chenilles d'origine parthénogénésique. Paris C.R. Acad. Sci. **165** 1917 192–194). [*Lepidoptera.*] **799**

Lécaillon, A. Sur la biologie des chenilles et des papillons de *Bombyx mori* ayant une origine parthénogénésique. Paris C.R. Acad. Sci. **165** 1917 (289–291). [*Lepidoptera.*] **800**

Lécaillon, A. Sur l'apparition de "bivoltins accidentels" dans les races univoltines de *Bombyx* du mûrier et sur l'explication rationelle de ce phénomène. Paris C.R. Ac. Sci. **165** 1917 (603–605). [*Lepidoptera.*] **801**

Lécaillon, A. Sur les caractères spéciaux que présentent, aux différents stades de leur développement, les bivoltins accidentels qui se produisent chez le *Bombyx* du mûrier. Paris C.R. Acad. Sci. **165** 1917 (683–685). (*Lepidoptera.*] **802**

Lécaillon, A. Sur l'aptitude à la parthénogénèse naturelle, considerée chez diverses races ou variétés de Bombyx du mûrier. Paris C.R. Acad. Sci. **165** 1917 (799–801). [*Lepidoptera.*] **803**

Le Cerf, F. Contributions à l'étude des Aegeriidae. [In **Oberthür**] Ét. Lép. comp. **14** 1917 (137–388) pls.475–484. [*Lepidoptera.*] **804**

Leefmans, S. Bydrage tot het Helopeltis-vraagstuk voor de thee. [Beitrag zur Helopeltis-Frage in Beziehung zur Theekultur.] Buitenzorg. Meded. Afd. Plantenziekten **26** 1916 (1–214) 11 Taf. [*Heteroptera.*] **805**

Leefmans, S. Insecten, schadelyk voor koloniale producten en hunne bestryding. [Insekte, schädlich für koloniale Produkte und ihre Bekämpfung.] Teysmannia Batavia **28** 1917 (235–250). **805a**

Lefroy, H. M. *vide* Jackson and Lefroy.

Long, C. W. *Syncalypta spinosa* in North America. J. N. York ent. Soc. **25** 1917 (128). [*Coleoptera.*] **806**

Long, C. W. and **Mutchler,** A. G. Supplement to preliminary list of the *Coleoptera* of the West Indies. Bull. Amer. Aus. New York **37** 1917 (191–220). **806a**

Leonard, M. D. *vide* Crosby and Leonard.

Leonardi, G. Terza contribuzione alla conoscenza delle Cocciniglie italiane. Boll. Lab. Portici **12** 1917 (188–216). [*Homoptera.*] **807**

Lesne, P. Notes sur les *Philorea, Coléoptères* ténébrionides de la faune des Andes. Bull. Soc. ent. France **1917** (71–72). **808**

Lesne, P. Notes sur divers Cisides. Bull. Soc. ent. France **1917** 1917 (190–192). [*Coleoptera.*] **809**

Lestage, J. A. Mission Stappers au Tanganyka-Moero. Deuxième contribution à l'étude des larves des Ephémères et Perlides. Rev. Zool. afric. Bruxelles **5** 1917 (121–140). **810**

Lestage, J. A. Notes sur quelques *Bittacus* congolais. Rev. zool. afric. Bruxelles **5** 1917 (112–120). [*Neuroptera.*] **811**

Lestage, J. A. Contribution à la connaissance des larves des éphémères du Congo belge. Rev. zool. afric. Bruxelles **4** 1916 (314–319). [*Ephemeroptera.*] **812**

Ley, R. Revision du genre *Tricholepis* Blanchard et description d'un genre voisin. Insecta Rennes **7** 1917 (28–35). [*Coleoptera.*] **813**

Lichtenstein, J. L. Observations sur les coccinellides mycophages. Bull. Soc. ent. France **1917** 1917 (298–302). [*Coleoptera.*] **814**

Lichtenstein, J. L. and **Picard,** F. Etude morphologique and biologique du *Sycosoter lavagnei* Picard et Licht. hecabolide parasite de l'*Hypoborus ficus* Er. Bull. biol. France Belgique Paris **51** 1917 (440–474). [*Hymenoptera.*] **815**

Liljeblad, E. New species of *Coleoptera* of the genus *Mordellistena.* Canad. Entom. London Can. **49** 1917 (9–13). **816**

Lindsay, A. W. A list of the butterflies of Iowa. Ent. News Philadelphia **28** 1917 (347–353). [*Lepidoptera.*] **817**

Lister, J. J. Note on the influence of temperature on the development of pigment in *Pieris rapae,* L. Entomologist London **50** 1917 (241–244). [*Lepidoptera.*] **818**

Ljungdahl, D. Etwas über die Oberflächenskulptur einiger Schmetterlingspuppen. Ent. Tidskr. Uppsala **38** 1917 (219–228) pls. [*Lepidoptera.*] **819**

Lloyd, J. D. K. Mimicry. Rep. Winchester Coll. Soc. **1915-17** 1917 (69–81). **820**

Longley, W. H. Studies upon the biological significance of animal coloration. Amer. Nat. New York **51** 1917 (257–285). **821**

Lovett, A. L. Strawberry pests in Oregon. Agric. Exp. Sta. Oregon. Corvallis Rep. **1911-12** 1913 (122–134) pl. ix. ff. 14, 15. **822**

Lovett A. L. The currant maggot or gooseberry fruit-fly. (*Epochra canadensis* Loew.) Agric. Exp. Sta. Oregon Corvallis Rep. **1911-12** 1913 (135–136). [*Diptera.*] **823**

Lovett, A. L. The cabbage and radish maggot. (*Phorbia brassicae* Bouché). Agric. Exp. Sta. Oregon Corvallis Rep. **1911-12** 1913 (138–169) ff. 16–18. [*Diptera.*] **824**

Lovett, A. L. *vide* Wilson, H. F.

Lower, B. *Lepidoptera* of Broken Hill. Pt. 3 Adelaide S. Aust. Trans. R. Soc. **41** 1917 (369–377). **825**

Lucas, D. Diagnoses de deux *Lépidoptères* du nord de l'Afrique. Bull. Soc. ent. France **1917** 1917 53–54). **826**

Lucas, W. J. British *Neuroptera* in 1916. Entomologist London **50** 1917 (87–89). **827**

Lucas, W. J. British *Orthoptera* in 1916. Entomologist London **50** 1917 (136–140). **828**

Lucas, W. J. British Odonata in 1916. Entomologist London **50** 1917 (201–204). [*Paraneuroptera.*] **829**

Ludlow, C. S. *Cycloleppteron* Theobald. Psyche Boston **24** 1917 (53). [*Diptera.*] **830**

Luginbill, P. and Ainslie, G. G. The lesser corn stalk-borer. Bull. U.S. Dep. Agric. Ent. **539** 1917 (27 pp.) 3 pls. [*Lepidoptera.*] **831**

Lundström, C. *vide* Poppius, P. B.

Lutz, A. Terceira contribuição o conhecimento das especies brazileiras do genero *Simulium.* Mem. Inst. Oswaldo Cruz Rio de Janeiro **9** 1917 (63–66) pl. xxv. [*Diptera.*] **832**

Lutz, A. Contribuições ao conhecimento dos oestrideos brazileiros. Mem. Inst. Oswaldo Cruz Rio de Janeiro **9** 1917 (94–113) pls. xxvii–xxix. [*Diptera.*] **833**

Lyle, G. T. Contributions to our knowledge of the British Braconidae. No. 3. Microgasteridae. Entomologist London **50** 1917 (51–53 etc.). [*Hymenoptera.*] **834**

Lyle, G. T. On the cocoon colour of various insects. Entomologist London **50** 1917 (153, 154). **835**

Mabille, P. and Boullet, E. Descriptions d'Hespérides nouveaux. Bull. Soc. ent. France **1916** 1917 (243–247). [*Lepidoptera.*] **836**

Mabille, P. and Boullet, E. Description d'Hespérides nouveaux. Bull. Soc. ent. France **1916** 1917 (320–324). [*Lepidoptera.*] **837**

Mabille, P. and Boullet, E. Description d'Hespérides nouveaux. Bull. Soc. ent. France **1917** 1917 (54–60). [*Lepidoptera.*] **838**

Mabille, P. and Boullet, E. Description d'Hespérides nouveaux. Bull. Soc. ent. France **1917** 1917 (97–101). [*Lepidoptera.*] **839**

McClung, C. E. The multiple chromosomes of *Hesperotettix* and *Mermiria.* J. Morphol. Philadelphia **29** 1917 (519–590) 8 pls. [*Orthoptera.*] **840**

McClymont, J. R. Butterfly collecting in the Pyrénées-orientales. Entomologist London **50** 1917 (89–94). (*Lepidoptera.*] **841**

McColloch, J. W. A method for the study of underground insects. J. econ. Ent. Concord **10** 1917 (183–187). **842**

McDermott, F. A. Observations on the light-emission of American Lampyridae. Canad. Entom. London Can. **49** 1917 (53–61). [*Coleoptera.*] **843**

Macdonald, A. Notes on blood-sucking flies in Grenada. Bull. ent. Res. London **7** 1917 (259–264) pls. iii and iv. [*Diptera.*] **844**

MacDowell, E. C. The bearing of selection experiments with *Drosophila* upon the frequency of germinal changes. Proc. Nation. Ac. Washington **3** 1917 (291–297). [*Diptera.*] **845**

MacDowell, E. C. Bristle inheritance in *Drosophila.* 1. Extra bristles. [With bibliography.] J. Exp. Zool. Philadelphia **19** 1915 (61–98) ff. tables. (*Diptera.*] **845a**

McDunnough, J. M. *vide* Barnes and McDunnough.

Macfie, J. W. S. The limitations of kerosene as a larvicide, with some observations on the cutaneous respiration of mosquito larvae. Bull. ent. Res. London **7** 1917 (277–295). [*Diptera.*] **846**

Macfie, J. W. S. Morphological changes observed during the development of the larva of *Stegomyia fasciata.* Bull. ent. Res. London **7** 1917 (297–307). [*Diptera.*] **847**

Macfie, J. W. S. *vide etiam* Ingram and Macfie.

McGregor, E. A. Eight new Mallophaga of the genus *Lipeurus* from North-American birds. Psyche Boston **24** 1917 (105–117) pls. v.–vii. [*Lipoptera.*] **848**

McGregor, E. A. Six new species of Mallophaga from North-American mammals. Ann. ent. Soc. Amer. Columbus **10** 1917 (167–175) pls. xvi. and xvii. [*Lipoptera.*] **849**

McGregor, E. A. Three new Mallophaga from North-American birds. Ent. News Philadelphia **28** 1917 (433–437) pl. xxviii. [*Lipoptera.*] **850**

McGregor, E. A. *Bucculatrix thurberiella* a pest of cotton in the Imperial valley. J. Econ. Ent. Concord N.H. **9** 1916 (505–510) pls. 36 37. [*Lepidoptera.*] **850a**

MacGregor, M. E. A summary of our knowledge of insect vectors of disease. Bull. ent. Res. London **8** 1917 (155–163). **851**

Machida, J. The spermatogenesis of an *Orthopteron, Atractomorpha bedeli* Bol. J. Coll. Agric. Tokyo **6** 1917 (215–244) pls. xvi–xviii. **852**

McIndoo, N. E. The olfactory organs of *Lepidoptera.* J. Morphol. Philadelphia **29** 1917 (33–54). **853**

McIndoo, N. E. Recognition among insects. Smithsonian misc. Coll. Washington **68** No. 2 1917 (1–78). **854**

Main, H. On rearing beetles of the genus, *Geotrupes.* Pr. S. London ent. Soc. **1916-17** 1917 (18–22) pl. i. [*Coleoptera.*] **855**

Maki, M. Three new species of *Trichosiphum* in Formosa. Collection of Essays for Mr. Y. Nawa 1917 (9–20) 3 pls. [*Homoptera.*] **856**

Malcolm, G. E. Butterfly collecting in Placerita Canyon, California. Lorquinia, Los Angeles Cal. **1** 1916 (21–22). [*Lepidoptera.*] **856a**

Malenotti, E. Sopra un caso di endofagia dell' *Aspidiotiphus citrinus* (Craw.) How. sul *Chrysomphalus dictyospermi* (Morg.) Leon. Redia Firenze **12** 1917 (15, 18). [*Hymenoptera.*] **857**

Malenotti, E. Sulle pretese varietà del *Chrysomphalus dictyospermi* (Morg.) Leon. Redia Firenze **12** 1917 (109–123). [*Homoptera.*] **858**

Malenotti, E. *Signiphora merceti* Malen. n.sp. Redia Firenze **12** 1917 (181). [*Hymenoptera.*] **859**

Malenotti, E. Nuovi Diaspiti. Redia Firenze **12** 1917 (183–194) pl. i. [*Homoptera.*] **860**

Malenotti, E. *Prospaltella fasciata* Malen. n.sp. Redia Firenze **12** 1917 (195). [*Hymenoptera.*] **861**

Malenotti, E. *Metalaptus torquatus* n.gen. e n.specie di calcidite. Redia Firenze **12** 1917 (339) pl. v. [*Hymenoptera.*] **862**

Malloch, J. R. A preliminary classification of *Diptera,* exclusive of Pupipara, based upon larval and pupal characters, with keys to imagines in certain families. Part i. Bull. Illinois Lab. Urbana **12** 1917 (161–409) pls. xxviii–lvii. **863**

Malloch, J. R. A new North-American species of the genus *Tetramerinx.* Canad. Entom. London Can. **49** 1917 (225 and 226). [*Diptera.*] **864**

Malloch, J. R. The anthomyiid genus *Phyllogaster.* Canad. Entom. London Can. **49** 1917 (227 and 228). [*Diptera.*] **864a**

Malloch, J. R. Key to the subfamilies of Anthomyiidae. Canad. Entom. London Can. **49** 1917 (406–408). [*Diptera.*] **865**

Mally, C. W. Note on the eversion of the ptilinum during the emergence of the housefly *Musca domestica.* L. S. Afric. Journ Sc. **17** 1917 (599). [*Diptera.*] **866**

Mally, C. W. Natural enemies of the Argentine ant. *Iridomyrmex humilis* Mayr. S. Afric. Journ. Sc. **14** (244–347). **867**

Mantero, G. Viaggio di Leonardo Fea nell' Africa occidentale. Chrysididae. Ann. Mus. Doria Genova **47** 1916 (26–32). [*Hymenoptera.*] **868**

Mantero, G. Materiali per la conoscenza della fauna eritrea. Nuovi specie di *Imenotteri* scavatori. Ann. Mus. Doria Genova **47** 1917 (365–376). **869**

Marchand, W. Notes on the habits of the snow-fly *Chionea.* Psyche Boston **24** 1917 (142–153) pls. viii and ix. (*Diptera.*] **870**

Marchand, W. An improved method of rearing Tabanid larvae. J. econ. ent. Concord **10** 1917 (469–473). [*Diptera.*] **871**

Marchand, W. Notes on the early stages of *Chrysops.* J. N. York Ent. Soc. **25** 1917 (149–163) pls. x–xii. [*Diptera.*] **872**

Marshall, G. A. K. On new species of Indian Curculionidae. Part iii. Ann. Nat. Hist. London **20** 1917 (188–198). [*Coleoptera.*] **873**

Marshall, G. A. K. On new weevils of the genus *Mecysmoderes* from India. Ann. Nat. Hist. **19** 1917 (395–404). [*Coleoptera.*] **874**

[**Marshall,** G. A. K.] The review of applied Entomology. **5.** Series A agricultural (1–767). B Medical and veterinary (1–237) London 1917. **875**

Marshall, G. A. K. *vide etiam* Arrow, etc.

Marumo, N. Notes on some *Lepidoptera* heterocera of Japan with descriptions of 2 new genera and 4 new species. Collection of Essays for Mr. Y. Nawa 1917 (23–37). **876**

Masi, L. Chalicididae of the Seychelles islands with an appendix by J. J. Kieffer. Novit. Zool. Tring **24** 1917 (121–230). [*Hymenoptera.*] **877**

Masi, L. A new species of *Cerapterocerus* Westw. (*Eusemion* Dahlb.) (Encyrtidae, Chalcidoidea) from Italy. Ent. Mo. Mag. London **53** 1917 (80). [*Hymenoptera.*] **878**

Matsuhari, T. *vide* Kawase, S.

Matsumura, S. A list of the Japanese and Formosan Cicadidae, with descriptions of new species and genera. Sapporo Trans. Sapporo Nat. Hist. Soc. **6** 1917 (186–212) 3 pls. [*Homoptera.*] **878a**

Matsumura, S. Suidomushi ni tsuite. [On some aqueduct insects.] Dobuts. Z. Tokyo **29** 1917 (1–7). [*Diptera.*] **879**

Matsumura, S. Synopsis of the Pemphigidae. (7 new genera and 20 new species mentioned). Collection of Essays for Mr. Y. Nawa 1917 (39–94) 3 pls. [*Homoptera.*] **880**

Matsumura, S. A list of the aphididae of Japan, with descriptions of new species and genera. Sapporo J. Coll. Agric. **7** 1917 (351–414) 7 pls. [*Homoptera.*] **881**

Mattoon, E. W. *vide* Zeleny, C.

Maulik, S. Solubility of the scale of *Lepidosaphes ulmi,* Linn. Bull. ent. Res. London **7** 1917 (267–269). [*Homoptera.*] **882**

Maulik, S. Note on the subgenus *Paradownesia* Gestro. Ann. Nat. Hist. London **20** 1917 (130–132). [*Coleoptera.*] **883**

Maulik, S. Cassidinae and Bruchidae from the Seychelles islands and Aldabra. Ann. Nat. Hist. London **19** 1917 (144–146). [*Coleoptera.*] **884**

Maxson, A. C. Some unpublished notes on *Pemphigus betae* Doane. J. Econ. Ent. Concord N.H. **9** 1916 (500–505). [*Homoptera.*] **884a**

Maxwell-Lefroy, H. The control of flies and vermin in Mesopotamia. Agric. J. India **11** 1916 (323–331). **885**

May, H. G. The appearance of reverse mutations in the bar-eyed race of *Drosophila* under experimental control. Proc. Nation. Ac. Washington **3** 1917 (544 and 545). [*Diptera.*] **886**

May, R. M. Insect collecting in the San Bernardino range. Lorquinia Los Angeles Cal. **1** 1916 (11). **886a**

Mayné, R. La ponte du *Sahlbergella singularis* Hagl., auteur du chancre des cacaoyers de l'Afrique occidentale. Bull. Agric. Congo belge Londres **7** 1916 (1918–200). [*Homoptera.*] **887**

Mayné, R. Insectes et autres animaux attaquant le cacaoyer au Congo belge. Etudes biol. agric. Belgique London **3** 1917 (1–80) 5 pls. **887a**

Meade-Waldo, G. *vide* Turner, Meade-Waldo and Morley.

Melander, A. L. The pronunciation of insect names. Brooklyn N. Y. Bull. Ent. Soc. **11** 1916 (93–101). **887b**

Melichar, L. Neue paläarktische *Homopteren.* Wien. ent. Zeit. **33** 1914 (259–260). **887c**

Menon, T. K. *vide* Cornwall and Menon.

Mercet, R. G. Especies españolas del género *Aphycus.* Bol. Soc. espan. Madrid **17** 1917 (128–139). [*Hymenoptera.*] **888**

Mercet, R. G. Un nuevo género de Encirtinos. Bol. Soc. espan. Madrid. **17** 1917 (203–206). [*Hymenoptera.*] **889**

Mercet, R. G. Géneros nuevos de Encirtinos (*Himenopteros* calcididos). Bol. Soc. espan. Madrid **17** 1917 (537–544). **890**

Merrill, D. E. The grape leafhopper. Agric. Exp. Sta. New Mexico State College Bull. No. **94** 1915 (1–33) pl. [*Homoptera.*] **890a**

Metcalf, C. L. Two new Syrphidae from eastern North America. Ent. News Philadelphia **28** 1917 (209–211) pl. xvi. [*Diptera.*] **891**

Metcalf, Z. P. The wing venation of the Cercopidae. Ann. ent. Soc. Amer. Columbus **10** 1917 (27–32) 2 pls. [*Homoptera.*] **892**

Metcalfe, J. W. A new Geometrid moth. Entomologist London **50** 1917 (73, 74). (*Lepidoptera.*] **893**

Metz, C. W. Chromosome studies in the *Diptera.* 1. A preliminary survey of five different types of chromosome groups in the genus *Drosophila.* J. Exp. Zool. Philadelphia **17** 1914 (45–59) pl. 1. **894**

Metz, C. W. and **Bridges,** C. B. Incompatibility of mutant races in *Drosophila.* Proc. nation. Ac. Washington **3** 1917 (673–678). [*Diptera.*] **895**

Meunier, F. Un Pompilidae de l'ambre de la Baltique. 's Gravenhage Tydschr. Ent. **60** 1917 (181–184). [*Hymenoptera.*] **896**

Meunier, F. Note complémentaire concernant *Styringomyia venusta* Loew du copal récent de Zanzibar. s'Gravenhage Tydschr. Ent. **60** 1917 [1918] (370–375) 7 figs. [*Diptera.*] **897**

Meunier, F. Sur quelques insectes de l'Aquitanien de Rott. Sept Montagnes (Prusse rhénane.) Amsterdam Verh. K. Akad. Wet. 2e Sect. **20** No. 1 1917. [Report: Amsterdam Versl. Wis. Nat. Afd. K. Akad. Wet. **26** [1917) (133) (3–17) 4 pls. 22 figs. (Hollandais). **898**

Meves, Y. *Tephroclystia* (*Eupithecia*) *sinuosaria,* Ev., dess utveckling från och med ägget. Ent. Tidskr. Uppsala **38** 1917 (147–152). [*Lepidoptera.*] **899**

Meves, Y. *Catocala fraxini* L., dess levnadsbana från moderlivet till fjäril. Ent. Tidskr. Uppsala **38** 1917 (229–237; summary in German 237–239). [*Lepidoptera.*] **900**

Meyere, J. C. H. **de.** Studien über südostasiatische *Dipteren.* xiii. s' Gravenhage Tydschr. Ent. **60** 1917 (238–251) 5 Textfig. **901**

Meyere, J. C. H. **de.** Studien über südostasiatische *Dipteren.* xiv. 's Gravenhage Tydschr. Ent. **60** 1917 (275–369) 2 Textfig. **902**

Meyrick, E. Exotic *Microlepidoptera.* Vol. **2** pts. 2 and 3 Marlborough 1917 (33–96). **903**

Meyrick, E. Descriptions of South American Micro-*Lepidoptera.* Tr. ent. Soc. London **1917** 1917 (1–52). **904**

Meyrick, E. Descriptions of New Zealand *Lepidoptera.* Tr. New Zealand Inst. Wellington **49** 1917 (245–247). **905**

Meyrick, E. Revision of New Zealand Notodontina. Tr. New Zealand Inst. Wellington **49** 1917 (248–273). [*Lepidoptera.*] **906**

Meyrick, E. On the genus *Paltodora.* Ent. Mo. Mag. London **53** 1917 (113). [*Lepidoptera.*] **907**

Meyrick, E. Two new Indian species of *Cosmopteryx.* Ent. Mo. Mag. London **53** 1917 (257 and 258). [*Lepidoptera.*] **908**

Meyrick, E. Descriptions of some new South African Microlepidopterous bagworms. Ann. Natal Mus. **3** 1917 (615–618). [*Lepidoptera.*] **909**

Meyrick, E. Descriptions of South African Micro-*Lepidoptera.* Ann. S. Afr. Mus. **17** (1–21) 1917. **910**

Middleton, W. Notes on *Dianthidium arizonicum* Rohwer. Washington D.C. Proc. ent. Soc. **18** 1916 (193–195) pl. xv. [*Hymenoptera.*] **911**

Mierzejewski, W. *Aeschna osiliensis* **sp. n.** Bull. Ac. Cracovie, B 1913 (79–86) pls. xiv and xv. [*Paraneuroptera.*] **912**

Miller, D. Contributions to the *Diptera* fauna of New Zealand. Part i. Tr. New Zealand Inst. Wellington **49** 1917 (172–194). **913**

e note

Minozzi, C. Contributo allo studio della speleologia italiana. La grotta di S. Maria M. sul monte Vallestra (Reggio E.). Bull. Soc. ent. ital. Firenze **48** 1917 (164–174). **914**

Misra, C. S. The Indian sugarcane leaf-hopper *Pyrilla aberrans,* Kirby. Mem. Dep. Agric. India Ent. **5** 1917 (73–136) pls. x–xv. (*Homoptera.*] **915**

Mitzmain, M. B. The bionomics of *Stomoxys calcitrans* Linnaeus; a preliminary account. Philippine J. Sci. Manila Sect. B. Trop. Med. **8** 1913 (29–48). [*Diptera.*] **916**

Mitzmain, M. B. The biology of *Tabanus striatus* Fabricus, the horsefly of the Philippines. Philippine J. Sci. Manila Sect. B. Trop. Med. **8** 1913 (197–221) pls. i–vii. [*Diptera.*] **917**

Mitzmain, M. B. The mechanical transmission of surra by *Tabanus striatus* Fabricus. Philippine J. Sci. Manila Sect. B. Trop. Med. **8** 1913 (223–229) tables. [*Diptera.*] **918**

Mjöberg, E. Die Käferfauna der Färöer. Ark. Zool. Stockholm **10** No. 27 1916 (21) 6 textfigs. [*Coleoptera.*] **919**

Mjöberg, E. Results of Dr. E. Mjöberg's Swedish Scientific Expeditions to Australia 1910–1913. 14. Cetonidae Rutelidae Passalidae: Chrysomelidae Subfam. Sagrinae Cassidinae Hispinae. Ark. Zool. Stockholm **11** No. 3 1917 (19) 12 textfigs. [*Coleoptera.*] **920**

Mongenet, J. Notes sur les Phytometrinae (*Plusiidae*) du bassin genevois. Bull. Soc. Lép. Genève **3** 1916 (159–164). [*Lepidoptera.*] **921**

Montandon, A. L. *Hémiptères* de la Basse-Egypte. 1. Geocorinae. Bull. Soc. ent. Egypte **9** 1916 (38–51). [*Heteroptera.*] **922**

Montandon, A. L. Mission Stappers au Tanganyka-Moero. Deux nouvelles espèces d'Hydrocorises. Rev. Zool. afric. Bruxelles **4** 1916 (117–120). [*Heteroptera.*] **923**

Montandon, A. L. Mononychidae. Nova Guinea. Résultats de l'expédition scientifique néerlandaise à la Nouvelle Guinée en 1903 sous les auspices de Arthur Wichmann. Leide (E. J. Brill) **5** livr. VI 1917 (566) [*Heteroptera.*] **924**

Morgan, T. H. A critique of the theory of evolution. Princeton 1916 (x + 1917). [*Diptera.*] **925**

Morgan, T. H. Two sex-linked lethal factors in *Drosophila* and their influence on the sex-ratio. J. Exp. Zool. Philadelphia **17** 1914 (81–122). [*Diptera.*] **926**

Morgan, T. H. A third sex-linked lethal factor in *Drosophila.* J. Exp. Zool. Philadelphia **17** 1914 (315–324) ff. 1–3. [*Diptera.*] **927**

Morgan, T. H. Mosaics and gynandromorphs in *Drosophila.* [Abstract.] New York Proc. Soc. Exp. Biol. Med. **11** 1914 (171–172), [*Diptera.*] **928**

Morgan, T. H. The predetermination of sex in phylloxerans and aphids. J. Exp. Zool. Philadelphia **19** 1915 (285–321) pls. diagrams table. [*Homoptera.*] **928a**

Morice, F. D. Notes on certain British (or recorded as British) species of *Oxybelus.* Ent. Mo. Mag. London **53** 1917 (238–244 271–275). [*Hymenoptera.*] **929**

Morice, F. D. and **Durrant,** J. H. Further notes on the "Jurinean" genera of *Hymenoptera,* correcting errors and omissions in a paper on that subject published in Trans. Ent. Soc. Lond. 1914 pp. 339–436. Tr. ent. Soc. London **1916** 1917 (432–442). **930**

Morley, C. On some South African Ichneumonidae in the collection of the South African Museum. Pt. II Ann. S. Afric. Mus. **17** 1917 (191–229). [*Hymenoptera.*] **931**

Morley, C. Some Stephanidae, with descriptions of new species. Entomologist London **50** 1917 (33–36, 105–113). [*Hymenoptera.*] **932**

Morley, C. On the proctotrypid genus *Gonatopus* Ljungh. Entomologist London **50** 1917 (222–227). [*Hymenoptera.*] **933**

Morley, C. and **Atmore,** E. A. The *Diptera* of Norfolk and Suffolk. Trans. Norfolk Nat. Soc. **10** 1915 Supplement (1–180). **934**

Morris, H. M. On the larval and pupal stages of *Bibio johannis* L. Ann. appl. Biol. Cambridge **4** 1917 (91–114) pl. iii. [*Diptera.*] **935**

Morrison, H. Monograph of the nearctic *Hymenoptera* of the genus *Bracon* Fabricius. P.U.S. Nat. Mus. Washington **52** No. 2178 (305–343) pls. xxiv–xxvii. **936**

Mote, D. C. Observations on the distribution of warble flies in Ohio. Ohio J. Sci. Columbus **17** 1917 (169–176.) [*Diptera.*] **937**

Moulton, J. C. New species of Cicadidae from Sumatra. Entomologist London **50** 1917 (1–3). [*Homoptera.*] **938**

Moznette, G. F. The fruit-tree leaf *Syneta*, spraying data and biological notes. J. Econ. Ent. Concord N.H. **9** 1916 (458–461) pls. 32 33. [*Coleoptera.* **938a**

Müller, J. Zur Kenntnis der Gattung *Molops*. Ent. Mitt. Berlin **6** 1917 (347–354). [*Coleoptera.*] **939**

Muir, F. The Derbidae of the Pjilippine islands. Philipp. J. Sci. Manila D **12** 1917 (49–104) pl. [*Homoptera.*] **940**

Muir, F. A new genus of Derbidae from Borneo. Philippine J. Sci. D **12** 1917 (217 218). [*Homoptera.*] **941**

Muir, F. A new Philippine genus of Delphacidae. Philippine J. Sci. D **12** 1917 (351). [*Homoptera.*] **942**

Muir, F. New Hawaiian Delphacidae. P. Hawai. ent. Soc. **3** 1917 (298–311). [*Homoptera.*] **943**

Muir, F. *Homopterous* notes. P. Hawai. ent. Soc. **3** 1917 (311–338). **944**

Muir, F. The introduction of *Scolia manilae* Ashm. into the Hawaiian islands. Ann. ent. Soc. Amer. **10** 1917 (207–210). (*Hymenoptera.*] **945**

Mukogawa, Y. Ukogifushi-kijirami. [A species of Psyllidae on *Acanthopanax aculeatum.*] Collection of Essays for Mr. Y. Nawa **1917** (58–61). [*Homoptera.*] **946**

Muller, H. J. A gene for the fourth chromosome of *Drosophila*. J. Exp. Zool. Philadelphia **17** 1914 (325–336). [*Diptera.*] **947**

Muller, H. J. An oenothera-like case in *Drosophila*. Proc. Nation. Ac. Washington **3** 1917 (619–626). [*Diptera.*] **948**

Munro, J. W. The structure and life-history of *Bracon* sp.: a study in parasitism. Edinburgh Proc. R. Soc. **36** 1915–16 (313–333). [*Hymenoptera.*] **948a**

Munro, J. W. The genus *Hylastes* Er., and its importance in forestry: a study in scolytid structure and biology. Proc. R. Phys. Soc. Edinburgh **20** 1917 (123–158) pls. vii-ix. [*Coleoptera.*] **949**

Musgrave, A. and **Zeck, E. H.** Illustrations of Australian *Coleoptera*. Australian Zoologist Sydney **1** 1917 (85 and 86) pl. ix. **950**

Myers, P. R. A new American parasite of the Hessian fly (*Mayetiola destructor* Say). P. U.S. nat. Mus. Washington **53** 1917 No. 2204 (255–257). [*Hymenoptera.*] **951**

Mutchler, A. J. *vide* Leng and Mutchler.

Myers, P. R. An American species of the *Hymenopterous* genus *Wesmaelia* Foerster. P. U.S. nat. Mus. Washington **53** No. 2206 1917 (293). **952**

Nabours, R. K. Studies of inheritance and evolution in *Orthoptera*. ii. J. Genetics Cambridge **7** 1917 (1–46) pls. i and ii.iiiT.c. (47-54). **952a**

Nagano, K. Kakinomimushiga. [On *Kakivora flavofasciata* Nagano.] Konch. Sek. Gifu **21** 1917 (10–14). [*Lepidoptera.*] **953**

Nagano, K. Studies of the Japanese Lasiocampidae and Drepanidae. Bulletin of the Nawa Entomological Laboratory Gifu **2** 1917 (1–45) 10 pls. [*Lepidoptera.*] **954**

Nakahara, W. On the physiology of the nucleoli as seen in the silk-gland cells of certain insects. J. Morphol. Philadelphia **29** 1917 (55–68) 2 pls. **955**

Navás, L. Algunos Mirmeleónidos de Africa. Ann. Mus. Doria Genova **47** 1916 (360–364). [*Neuroptera.*] **956**

Navás, L. Notes sur quelques *Néuroptères* du Congo belge. ii. Rev. Zool. Afric. Bruxelles **4** 1914 (91–100). iii. T.c. (172–182) pl. v. **957**

Navás, L. *Néuroptères* d'Egypte. Bull. Soc. ent. Egypte Le Caire **6** 1915 (150–159). **958**

Navás, L. Notas entomologicas. 2a serie 14. *Néuroptères* de Andorra. Bol. Soc. Aragon **16** 1917 (36–46). **959**

Navás, L. El órgano del olfato en los insectos. Bol. Soc. Aragon **16** 1917 (49–52). **960**

Navás, L. Notas sobre la família de los Osmilidos. Op. Mus. Barcèn. Zool. Barcelona **11** 1917 (1–21). **961**

Navás, L. *Plecopteros* nuevos de Cataluña. Annuar. Junta Ci. nat. Barcelona **2** 1917 (199–202). **962**

Navás, L. *Neuropteros* nuevos o poco conocidos (novena serie). Mem. Ac. Ci. Barcelona **13** No. 26 1917 (393–406). **963**

Navás, L. *Neuroptères* de l'Indo-Chine. Insecha Rennes **7** 1917 (8–17). **964**

Navás, L. Algunos insectos Neurópteros de la Argentina. Serie I. Physis Buenos Aires **3** 1917 (186–196). **965**

Navás, L. Neue *Neuropteren.* Ent. Mitt. Berlin **6** 1917 (274–282). **966**

Needham, J. G. The insect drift of lake shores. Canad. Entom. London Can. **49** 1917 (129–137). **967**

Needham, J. G. Notes on some recent studies of dragonfly wing tracheation. Ent. News Philadelphia **28** 1917 (169–173). [*Paraneuroptera.*] **968**

Neiva, A. and **Penna,** B. Viajem cientifica pelo norte da Bahia, sudoeste de Pernambuco, sul do Piauhi e de norte a sul de Goiaz. Mem. Inst. Oswaldo Cruz Rio de Janeiro **8** 1916 (74–224) 28 pls. map. **969**

Nelson, J. A. The relation of the malpighian tubules of the hind intestine in the honey bee larva. Science New York **46** 1917 (343–345). [*Hymenoptera.*] **970**

Newcomer, E. J. The dock false-worm: an apple pest. Washington U.S. Dept. Agric. Bull. No. **265** 1916 (1–40) pls. i ii ff. 1–6. [*Hymenoptera.*] **970a**

Newstead, R. Observations on scale-insects (Coccidae)—iii. Bull. ent. Res. London **7** 1917 (343–380) pls. vi and vii. [*Homoptera.*] **971**

Newstead, R. Observations on scale-insects (Coccidae)—iv. Bull. ent. Res. **8** 1917 (1–34). [*Homoptera.*] **972**

Newstead, R. Observations on scale-insects (Coccidae)—v. Bull. ent. Res. London **8** 1917 (125–134). [*Homoptera.*] **973**

Newton, L. V. The domestication of the Indian honey-bee. Agric. J. India **12** 1917 (44–57). [*Hymenoptera.*] **974**

Nicolay, A.S. Synopsis of the *Anthophilax* of North America. J. N. York ent. Soc. **25** 1917 (38–44). [*Coleoptera.*] **975**

Nielsen, J. C. Undersøgelser over entoparasitiske Muscidelarver hos Arthropoder. VI: Investigations on the entoparasitic larvae of some flies. VI: *Panzeria minor* Villen and Niels., *Ernestia connivens* Zett., *Winthemia quadripustulata* F., *Frivaldzkia distincta* Meig., *Campylochaeta obscura* Fall., *Tachina rustica* Fall., *Goniocera enigmatica* Villen. & Niels. København Nath. Medd. **68** 1917 (23–36) 20 figs. [*Diptera.*] **976**

Nielsen, E. Contributions to the biology of Megachile and Anthidium. København Fra Naturens Værksted **5** 1916 (325–365) 17 figs. [*Hymenoptera.*] **977**

Niishima, Y. Eine neue Gattung der Borkenkäfer. Collection of Essays for Mr. Y. Nawa 1917 (1–4) pl. **978**

Nire, K. Honposan chorui no ichi shinshu oyobi izokei ni tsuite. [Description of a new species and some aberrant forms of Japanese Rhopalocera.] Dobuts. Z. Tokyo **29** 1917 (145–148) pl. v. [*Lepidoptera.*] **979**

Nissen, H. C. Description of a new Aretiid. Novit. Zool. Tring **24** 1917 (438). [*Lepidoptera.*] **980**

Nordström, F. Några stekelnotiser. Ent. Tidskr. Uppsala **38** 1917 (322–325). [*Hymenoptera.*] **981**

Normand, H. Nouveaux *Coléoptères* de la faune tunisienne 10e note. Bull. Soc. ent. France **1916** 1917 (283–286). **982**

Northrup, Zae. A bacterial disease of June beetle larvae *Lachnosterna* spp. Agric. Exp. Sta. Michigan East Lansing Tech. Bull. No. **18** 1914 (1–37) ff. 1–22. [*Coleoptera.*] **983**

Nuttall, G. H. F. Bibliography of *Pediculus* and *Phthirius,* including zoological and medical publications dealing with human lice, their anatomy, biology, relation to disease, etc., and

prophylactic measures directed against them. Parasitology Cambridge **10** 1917 (1–42). [*Ellipoptera.*] **984**

Nuttall, G. H. F. The part played by *Pediculus humanus* in the causation of disease. Parasitology Cambridge **10** 1917 (43–79) pl. i. [*Ellipoptera.*] **985**

Nuttall, G. H. F. The biology of *Pediculus humanus.* Parasitology Cambridge **10** 1917 (80–185) pls. ii. and iii. [*Ellipoptera.*] **986**

Nuttall, G. H. F. Studies on *Pediculus.* i. The copulatory apparatus and the process of copulation in *Pediculus humanus.* Parasitology Cambridge **9** 1917 (293–324) pls. iii and iv. [*Ellipoptera.*] **987**

Oberthür, C. Étude de *lépidopterologie* comparée. Fasc. **13** Rennes Mars 1917 (1–86) pls. 414–436 and 1–4 (Castnia). **988**

Oberthür, C. Faune des *Lépidoptères* de Barbarie. Partie iii. Ét. Lép. comp. **13** 1917 (7–47) pls. 414–433. **989**

Oberthür, E. Études de *Lépidoptérologie* comparée. Fasc. **14** Rennes Sepr. 1917 (1–474) pls. 364–471 bis + other 5. **990**

Oberthür, C. Le genre *Actinote.* Ét. Lép. comp. **14** 1917 (77–126) pls. 463–473. [*Lepidoptera.*] **991**

Oberthür, C. À propos des Aegeriidae. Ét. Lép. comp. **14** (127–136). [*Lepidoptera.*] **992**

Oberthür, C. Considérations sur quelques espèces de *Lycaena.* Ét. Lép. comp. **14** 1917 (389–392). [*Lepidoptera.*] **993**

Oberthür, C. Conclusion [re *Lycaena argus* allies]. Ét. Lép. comp. **14** 1917 (461–469). [*Lepidoptera.*] **994**

Oberthür, C. Sur les observations du Dr. Roger Verity à propos de certaines espèces de *Zygaena.* Bull. Soc. ent. France **1917** 1917 (262–265). [*Lepidoptera.*] **995**

Oberthür, C. Les *Lépidoptères* hétérocères autour des lampes électriques de la gare de Rennes. Bull. Soc. ent. France **1917** 1917 (199–200). **996**

Okazaki, T. Korogirui no kobi ni tsuite. [On the copulation of Gryllidae.] Konch. Sek. Gifu **21** 1917 (401–410). [*Orthoptera.*] **997**

Olsen, C. E. Notes on *Draeculacephala inscripta* Van Duzee. J. N. York ent. Soc. **25** 1917 (215–218) pl. xiv. [*Homoptera.*] **998**

Orchymont, A. d'. De la place que doivent occuper dans la classification les sous-familles des Sphaeridiinae et des Hydrophilinae. Bull. Soc. ent. France **1916** 1917 (235–239). [*Coleoptera.*] **999**

Osborn, H. and **Drake,** C. J. Notes on Tingidae. Psyche Boston **24** 1917 (155–164) pl. x. [*Heteroptera.*] **1000**

Osborn, H. and **Drake,** C. J. Notes on American Tingidae with descriptions of new species. Ohio J. Sci. Columbus **17** 1917 (295–307). [*Heteroptera.*] **1001**

Oshima, M. Notes on a collection of termites from Luzon obtained by R. C. McGregor. Philippine J. Sci. D **12** 1917 (221–225). [*Isoptera.*] **1002**

Oshima, M. Three new species of termites from Caroline islands. Annot. Zool. Japan **9** Tokyo 1917 (195–200). [*Isoptera.*] **1003**

Oshima, M. Two species of termites from Foochow, China. Collection of Essays for Mr. Y. Nawa **1917** (5–7). [*Isoptera.*] **1005**

Ota, S. Honposan mizuhachi ni tsuite. [On a new Japanese aquatic *Hymenoptera* (Argiotypus).] Dobuts. Z. Tokyo **29** 1917 (281–285). **1006**

Otten, L. Over den infectiositeitsduur der Indische rattevloo. (Loemopsylla cheopis.) [Ueber die Infectionsdauer des Indischen Rattenflohs (*Loemopsylla cheopis.*)] Batavia Geneesk. Tydschr. Ned. Ind. **57** 1917 (309–315): Weltevreden Med. Geneesk. Lab. Feestbundel **1917** 219–225; Buitenzorg Mededeelingen Bungerlyken Geneeskundigen dienst Nederlandesch Indie **6** 1917 (120–126). (Dutch and English). [*Aphaniptera.*] **1007**

Oudemans, A. C. Aanteekeningen over Suctoria xxviii (Bemerkungen

über Suctoria. xxviii.] 's Gravenhage Ber. Ned. Ent. Ver. **4** 1917 p. 396. [*Aphaniptera.*] **1008**

Paine, J. H. An asymmetrial bird-louse found on three different species of troupials. P. U.S. nat. Mus. Washington **53** 1917 No. 2201 (231) pl. xxxii. [*Lipoptera.*] **1009**

Painter, T. S. A wing mutation in *Piophila casei.* Amer. Nat. New York **51** 1917 (306–308). [*Diptera.*] **1010**

Palmer, Miriam A. Additional notes on heredity and life history in the coccinellid genus *Adalia* Muls. Ann. ent. Soc. Amer. Columbus **10** 1917 (289–302). [*Coleoptera.*]. **1011**

Pantel, J. A propósito de un *Anisolabis* alado, contribución al estudio de los órganos voladores y de los esclerites torácicos en los Dermápteros; datos para la interpretación del macropterismo excepcional. Mem. Ac. Ci. Barcelona **14** No. 1 1917 (1–160) 6 pls. [*Orthoptera.*] **1012**

Pantel, J. Description de *Carausius* nouveaux et note sur les *Carausiu.* de l'Inde méridionale. Ann. Soc. ent. France **86** 1917 (267–306) pl. ii. [*Orthoptera.*] **1013**

Parker, J. B. A revision of the bembicine wasps of America north of Mexico. P. U.S. nat. Mus. Washington **52** No. 2173 1917 (1–55). [*Hymenoptera.*] **1014**

Parker, R. R. New flies of the genus *Sarcophaga* from Guam and the Philippines. P. U.S. nat. Mus. Washingtons **54** No. 2227 1917 (89–97). [*Diptera.*] **1015**

Parker, R. R. *vide* Honcij, J. A.

Parshley, H. M. Notes on North-American *Tingidae.* Psyche Boston. **24** 1917 (13–25). [*Heteroptera.*] **1016**

Parshley, M. H. Insects in ocean drift. i, *Hemiptera Heteroptera.* Canad. Entom. London Can. **49** 1917 (45–48). **1017**

Parshley, H. M. A species of *Macrotracheliella* found in New England. Ent. News Philadelphia **28** 1917 (37–38). [*Heteroptera.*] **1018**

Patch, E. M. Eastern Aphids, new or little known, part i. J. econ. Ent. Concord **10** 1917 (416–420). [*Homoptera.*] **1019**

Patten, B. M. A quantitative determination of the orienting reaction of the blowfly larva (*Calliphora erythrocephala* Meigen). J. Exp. Zool. Philadelphia **17** 1914 (213–280) ff. 1–24. [*Diptera.*] **1020**

Patten, B. M. An analysis of certain photic reactions, with reference to the Weber-Fechner law. 1. The reactions of the blowfly larva to opposed beams of light. Amer. J. Physiol. Baltimore **38** 1915 (313–338) ff. tables. (*Diptera.*] **1020a**

Patterson, J. T. Studies on the biology of *Paracopidosomopsis.* 1. data on the sexes. Biol. Bull. Woods Hole **32** 1917 (291–305). [*Hymenoptera.*] **1021**

Patterson, J. T. and **Porter,** Lelia T. Studies on the biology of *Paracopidosomopsis.* ii. Spermatogenesis of males reared from unfertilised eggs. Biol. Bull. Woods Hole **33** 1917 (38–50) 2 pls. [*Hymenoptera.*] **1022**

Patterson, J. T. Studies iii. Maturation and fertilization. Biol. Bull. Woods Hole **33** 1917 (57–64) 1 pl. **1023**

Peile, H. D. The packing of papered butterflies for safekeeping or despatch by post. J. Bombay N.H. Soc. **25** 1917 (309–312). [*Lepidoptera.*]. **1024**

Pellett, F. C. Life history and habits of *Polistes metricus,* Say. Des Moines Proc. Iowa Acad. Sci. **23** 1916 (275–284). [*Hymenoptera.*] **1024a**

Pemberton, C. E., and **Willard,** H. F. New parasite cages. J. econ. Ent. Concord **10** 1917 (525–527) pl. xxv. **1025**

Pemberton, C. E. *vide* Back & Pemberton.

Penna, B. *vide* Neiva & Penna.

Pennington, W. E. Notes on *Rhogas terminalis* Cress. J. Econ. Ent. Concord N. H. **9** 1916 (401–406) pl. 30 f. 24. [*Hymenoptera.*] **1025a**

Pérez, C. Liste chronologique des travaux scientifiques de Jean Pérez (1833–1914). Ann. Soc. ent. France **85** 1917 (355–366). **1026**

Perkins, R. C. L. On a new species of *Psammochares* (or *Pompilus*) in England. Ent. Mo. Mag. London **53** 1917 (10 & 11). [*Hymenoptera.*] **1027**

Perkins, R. C. L. *Nomada bucephalae* n.n. for *N. lateralis* Sm. (nee Panz.) and notes on *R. conjungens* H.-Sch. Ent. Mo. Mag. London **53** 1917 (12). [*Hymenoptera.*] **1028**

Perkins, R. C. L. On the Kirby collection of *Sphecodes*, *Nomada*, *Andrena* and *Cilissa* with the description of a species of *Sphecodes* hitherto unrecorded from Britain. Ent. Mo. Mag. London **53** 1917 (45–52). [*Hymenoptera.*] **1029**

Perkins, R. C. L. Notes on the collection of British *Hymenoptera* aculeata formed by F. Smith. Ent. Mo. Mag. London **53** 1917 (71–76 159–162 229–231). **1030**

Perkins, R. C. L. New hawaiian Caraboidea. Ent. Mo. Mag. London **53** 1917 (246–250). [*Coleoptera.*] **1031**

Perkins, R. C. L. Notes on *Callimorpha dominula* and *Vespa austriaca*. J. Torquay Nat. Hist. Soc. **2** 1917 (142–145). **1032**

Peschet, R. Description de deux espèces nouvelles de *Neptosternus* Sharp. Bull. Soc. ent. France **1916** 1917 (315–317). [*Coleoptera.*] **1033**

Peschet, R. *Coléoptères* des îles mascareignes et séchelles. Dytiscidae et Gyrinidae. Ann. Soc. ent. France **86** 1917 (1–56). **1034**

Peschet, R. Mission Stappers au Tanganyka-Mocro. *Hydaticus stappersi* nov. spec. Rev. zool. afric. Bruxelles **4** 1916 (221). [*Coleoptera.*] **1035**

Peterson, A. Studies on the morphology and susceptibility of the eggs of *Aphis avenae* Fab., *A. pomi* Degeer and *A. sorbi* Kalt. J. econ. Ent. Concord **10** 1917 (556–560). **1036**

Petherbridge, F. R. Frit fly (*Oscinus frit*) attacking winter wheat. Ann. appl. Biol. Cambridge **4** 1917 (1–3). [*Diptera.*] **1037**

Petherbridge, F. R. Note on attacks of *Phyllotreta vittula* on spring corn. Ann. appl. Biol. Cambridge **3** 1917 (138 & 139). [*Coleoptera.*] **1038**

Petherbridge, F. R. Fungoid and insect pests. Cambridge 1917 (vii + 174). **1039**

Peyerimhoff, P. de. Nouveaux *Coléoptères* du Nord-africain. 25ième note avec des renseignments synonymiques sur les Silphidae et les Histeridae. Ann. Soc. ent. France **86** 1917 (117–148). **1040**

Peyerimhoff, P. de. Description d'un nouveau *Medon* français et tableau des espèces du groupe *Hypomedon*. Bull. Soc. ent. France **1916** 1917 (240 241). [*Coleoptera.*] **1041**

Peyerimhoff, P. de. Nouveaux *Coléoptères* du Nord-Africain. 24me note. Faune de Djurdjura. Bull. Soc. ent. France **1916** 1917 (318). **1042**

Peyerimhoff, P. de. Phorésie et commensalisme chez les *Desmometopa*. Bull. Soc. ent. France **1917** 1917 (215–218). [*Diptera.*] **1043**

Peyerimhoff, P. de. Nouveaux *Coléoptères* du Nord-africain (vingt-sixième note): faune du cèdre et du sapin de Numidie. Bull. Soc. ent. France **1917** 1918 (329–332). **1044**

Peyerimhoff, P. de. Nouveaux *Coléoptères* du Nord-africain (vingt-septième nota): faune du massif des Mouzaïa. Bull. Soc. ent. France **1917** 1918 (371–374). **1045**

Peyerimhoff, P. de. *Ceratopogon* et *Meloe*. Bull. Soc. ent. France **1917** 1917 (250–253). [*Diptera.*] **1046**

Peyerimhoff, P. de. Description d'un nouveau *Geostiba* français. Bull. soc. ent. France **1917** 1918 (352). [*Coleoptera.*] **1047**

Peyron, J. Intressanta fjärilsfynd. Ent. Tidskr. Uppsala **38** 1917 (104). [*Lepidoptera.*] **1048**

Phillips, W. J. Report on *Isosoma* investigations. J. econ. Ent. Concord **10** 1917 (139–146) pls. viii & ix. [*Hymenoptera.*] **1049**

Philpott, A. A list of the *Lepidoptera* of Otago. Tr. New Zealand Inst. Wellington **49** 1917 (195–238). **1050**

Pic, M. Mélanges exotico-entomologiques. Fascc. **22–26** Moulins 1917 (each of 20 or 24 pp.). [*Coleoptera.*] **1051**

Pic, M. Matériaux pour servir à l'étude des Longicornes. 10 cah. 2 partie Saint Amand **1917** (1–20). **1052**

Pic, M. *Coléoptères* d'Egypte et du Sinai. Bull. Soc. ent. Egypte **6** 1914 (11–13). **1053**

Pic, M. Description d'un *Alcides* nouveau. Bull. Soc. ent. Egypte Le Caire **6** 1914 (49). [*Coleoptera.*] **1054**

Pic, M. Quatre nouveaux *Coléoptères* exotiques. Bull. Soc. Zool. France **42** 1917 (25–27). **1055**

Pic, M. Notes diverses, descriptions et diagnoses. Echange Moulins **33** 1917 (1–3 etc.). [*Coleoptera.*] **1056**

Pic, M. *Coléoptères* exotiques en partie nouveaux. Echange Moulins **33** 1917 (4 etc.) **1057**

Pic, M. Descriptions synopsis et rectifications concernant le groupe des Lagriidae. Echange Moulins **33** No. 383 hors texte (1–4). [*Coleoptera.*] **1058**

Pic, M. Sur le genre *Arge* Schr. (*Hylotoma* Latr.). Echange Moulins **33** 1917 (18). [*Hymenoptera.*] **1059**

Pic, M. Notes Hyménoptérologiques. Echange No. 381 horstexte (1–4). **1060**

Pic, M. Trois nouveaux *Ptilodactyla.* Bull. Soc. ent. France **1916** 1917 (299–300). [*Coleoptera.*] **1061**

Pic, M. Trois nouvelles espèces de *Scraptia* Latr. de Madagascar. Bull. Soc. ent. France **1917** 1917 (72–74). [*Coleoptera.*] **1062**

Pic, M. Deux nouveaux *Silidius* Gorh. Bull. soc. ent. France **1917** 1917 (123–124). [*Coleoptera.*] **1063**

Pic, M. Sur la nomenclature de quelques Melandryidae exotiques. Bull. Soc. ent. France **1917** 1917 (149–151). [*Coleoptera.*] **1064**

Pic, M. Deux nouveaux *Cantharis* L. de Chine. Bull. Soc. ent. France **1917** 1917 (160–161). [*Coleoptera.*] **1065**

Pic, M. Trois Malachides nouveaux de l'Afrique australe. Bull. Soc. ent. France **1917** 1917 (234–235). **1066**

Pic, M. Trois nouveaux *Spermophagus* Schoenh. Bull. Soc. ent. France **1917** 1917 (302 & 303). [*Coleoptera.*] **1067**

Pic, M. Nouveaux Cérambycides de la Chine méridionale. iii. Bull. Soc. ent. France **1917** 1918 (353–354). [*Coleoptera.*] **1068**

Picard, F. Notes biologiques sur quelques insectes de l'Hérault. Bull. Soc. ent. France **1917** 1918 (355–357). **1069**

Picard, F. and Lichtenstein, J. Un braconide nouveau, *Sycosoter lavagnei* n.g., n. sp., parasite de l'*Hypoborus ficus* Er. Bull. Soc. ent. France **1917** 1917 (284–287). [*Hymenoptera.*] **1070**

Pickard, F. *vide* Lichtenstein & Picard.

Pictet, A. Réactions thermotropiques chez les insectes (Résumé) Arch. Sci. Phys. Genève C.R. **38** 1914 (434–437). **1070a**

Pictet, A. Observations biologiques et recherches expérimentales sur l'hibernation d'*Abraxas grossulariata* L. Bull. Soc. Lép. Genève **3** 1916 (164–188). [*Lepidoptera.*] **1071**

Pierce, F. N. Occurrence in England of *Parornix finitimella* Z., a species of Gracilariadae new to the British list. Ent. Mo. Mag. London **53** 1917 (9). [*Lepidoptera.*] **1072**

Pierce, W. D. Studies of weevils (*Rhynchophora*) with descriptions of new genera and species. Washington Smithsonian Inst. Proc. U. S. Nation. Mus. **51** 1916 (461–473) ff. 1 2. [*Coleoptera.*] **1072a**

Pierce, W. D. Notes on a southern trip. Washington D.C. Proc. ent. Soc. **18** 1917 (206–208). **1073**

Pierre, C. Description d'un *Pachyrhina* nouveau des Pyrénées. Bull. Soc. ent. France **1917** 1917 (304–306). [*Diptera.*] **1074**

Planet, V. Notes sur quelques *Apion* de France. Ann. Soc. ent. France **86** 1917 (149–158). [*Coleoptera.*] **1075**

Plough, H. H. The effect of temperature on linkage in the second chromosome of *Drosophila.* Proc. Nation. Ac. Washington **3** 1917 (553–555). [*Diptera.*] **1076**

Plough, H. H. Cytoplasmic structures in the male germ cells of *Rhomaleum micropterum* Beauv. Biol. Bull. Woods Hole Mass. **32** 1917 (1–12) pl. i. [*Orthoptera.*] **1077**

Poche, F. Unberechtigte Namensänderungen unter den *Hymenopteren* und prinzipielle Bemerkungen über einschlägige nomenklatorische Fragen. Ent. Mitt. Berlin **6** 1917 (45–54). **1078**

Pool, C. J. C. 1. The *Coleoptera* of the family *Cissidae* found in Britain, with descriptions of two new species. 2. A new species of the coleopteran genus *Cryptorhynchus* Illiger. P. zool. Soc. London **1917** 1917 (83–93). **1079**

Pool, C. J. C. Notes from the Caird insect house. London Proc. Zool. Soc. **1917** 1917 (96–100). [*Coleoptera.*] **1080**

Poppius, B., **Lundström,** C. & **Frey,** R. Dipteren aus dem Sarekgebiet. [Einleitung. Von B. Poppius.—*Diptera nematocere.* Von Carl **Lundström.**—*Diptera brachycera.* Von Richard **Frey.**] (Naturwiss. Unters. des Sarekgebirges in Schwedisch-Lappland gel. von Dr. Axel Hamberg. **4** Lfg 6.) Stockholm 1917 (pr. 1916) (665–696) pl. x. **1081**

Porritt, G. T. Excessive abundance of the larvae of *Chareas graminis* in June 1917. Ent. Mo. Mag. **53** 1917 (176–177)). [*Lepidoptera.*] **1082**

Porter, C. E. Catálogo de los Siricidos de Chile. Revist. chilena **20** 1916 (14 & 15). [*Hymenoptera.*] **1083**

Porter, C. E. Descripción de un nuevo *Himenóptero* parasito de *Notolophus antiqua.* Revist. chilena **20** 1916 (96) pl. vi. **1084**

Porter, C. E. Notas breves de entomologia agricola. An. Zool. aplic. Santiago **1** 1917 (33–37). **1085**

Porter, Lelia T. The spermatocytic divisions of *Leptocoris haematoloma.* Biol. Bull. Woods Hole **33** 1917 (316–320) pl. [*Heteroptera.*] **1086**

Porter, Lelia T. *vide* Patterson & Porter.

Pouillaude, I. Les Cétonides malgaches. Suite. Insecta Rennes **7** 1917 (50–166) pls. i–viii. [*Coleoptera.*] **1087**

Poulton, E. B. Mimicry and butterflies. Proc. R. Inst. London **21** 1917 (372–379). [*Lepidoptera.*] **1088**

Poulton, E. B. *vide* Blair & Poulton.

Poulton, E. B. *vide* Shelford, R. W. C.

Powell, H. Observations biologiques concernant la *Lycaena alcon.* [In Oberthür] Ét. Lép. comp. **14** 1917 (393–419). [*Lepidoptera.*] **1089**

Powell, H. Observations relatives à *Lycaena armoricana* [In Oberthür] Et. Lep. comp. **14** 1917 (420–460). [*Lepidoptera.*] **1090**

Prout, L. B. Some points of interest in the Geometridae. Trans. London Nat. Hist. Soc. **1916** 1917 (42–48). [*Lepidoptera.*] **1091**

Prout, L. B. New Geometridae in the Joicey collection. Ann. Nat. Hist. London **20** 1917 (108–128) pl. vii. [*Lepidoptera.*] **1092**

Prout, L. B. On new and insufficiently known indo-australian Geometridae. Novit. Zool. Tring **24** 1917 (293–317). [*Lepidoptera.*] **1093**

Prout, L. B. New South American Geometridae. Novit. Zool. Tring **24** 1917 (374–392). [*Lepidoptera.*] **1094**

Prout, L. B. New African Geometridae. Novit. Zool. Tring **24** 1917 (428–436). [*Lepidoptera.*] **1095**

Prout, L. B. New Geometridae (*Lepidoptera*) in the South African Museum. Ann. S. Afric. Mus. **17** 1917 (47–77). **1096**

Prout, L. B. Spannerartige Nachtfalter. Seitz Fauna palaearct. Lief. 116–130 **4** 1915–1917 (153–479) pls. i–xxv. [*Lepidoptera.*] **1096a**

Quaintance, A. L. and **Baker,** A. C. A contribution to our knowledge of the white flies of the subfamily Aleyrodinae (Aleyrodidae). P. U. S. Nat. Mus. Washington No. 2156 **51** 1917 (335–445) pls. xxxii–xxxvii. [*Homoptera.*] **1097**

Quaintance, A. L. and **Geyer,** E. W. Life history of the codling moth in the Pecos valley New Mexico. Bull. U. S. Dep. Agric. ent. Washington **429** 1917 (1–90). [*Lepidoptera.*] **1098**

Quayle, H. J. Dispersion of scale insects by the wind. J. Econ. Ent. Concord N. H. **9** 1916 (486–492). [*Homoptera.*] **1098a**

Rabaud, E. Essai sur la vie et la mort des espèces. Bull. Sci. France Belg. Paris **50** 1917 (287–380). **1099**

Rabaud, E. Les chenilles parasitisées de *Zygaena occitanica* Vill. Bull. Sci. France Belg. Paris **50** 1917 (284–286). [*Lepidoptera.*] **1100**

Rabaud, E. Notes sur l'instinct de *Mellinus arvensis* L. et ses rapports avec celui des autres sphégiens. Bull. biol. France Belgique Paris **51** 1917 (331–346). **1101**

Rabaud, E. L'instinct paralyseur des *Hyménoptères.* Paris C.R. Acad. Sci. Paris **165** 1917 (680–683). **1102**

Rabaud, E. Sur les *Hyménoptères* parasites des oothèques d'*Orthoptères.* Bull. Soc. ent. France **1917** 1917 (178). **1103**

Raffray, A. Sur le genre *Mirus* Saulcy (*Imirus* Reitt.). Bull. Soc. ent. France **1917** 1917 (108–110). [*Coleoptera.*] **1104**

Rau, P. and **Rau,** Nellie. Longevity in Saturniid moths and its relation to the function of reproduction. St. Louis Mo. Trans. Acad. Sci. **23** 1914 (1–78) pls. i–v. [*Lepidoptera*]. **1105**

Rau, Nellie *vide* Rau, P.

Rayburn, M. F. Chromosomes of *Nomotettix.* Kansas Univ. Sci. Bull. Lawrence **10** 1917 (267–270) pl. i. [*Orthoptera.*] **1106**

Razzauti, A. Contributo alla conoscenza del tonchio del fagiuolo (*Acanthoscelides obtectus* Say). Boll. Lab. Portici **12** 1917 (94–122). [*Coleoptera.*] **1107**

Reeves, Edna M. The inheritance of extra bristles in *Drosophila melanogaster* Meig. Berkeley Univ. Cal. Publ. zool. **13** No. 13 1916 (495–514). [*Diptera.*] **1108**

Rehfous, M. Note sur la ponte d'*Epinephele jurtina* L. Bull. Soc. Lép. Genève **3** 1916 (156–159). [*Lepidoptera.*] **1109**

Rehfous, M. Contribution à l'étude des Lycénides. Fragments biologiques. Bull. Soc. Lép. Genève **3** 1917 (209–226). [*Lepidoptera.*] **1110**

Rehn, J. A. G. On *Coelophyllum simplex* and certain of its allies. Ent. News Philadelphia **28** 1917 (152–161) pl. xii. [*Orthoptera.*] **1111**

Rehn, J. A. G. Some critical notes on the giant katydids forming the group Steirodontia. Ent. News Philadelphia **28** 1917 (107–122) pl. x. [*Orthoptera.*] **1112**

Rehn, J. A. G. and **Hebard,** M. Studies in West Indian earwigs (*Dermaptera*). Bull. Amer. Mus. New York **37** 1917 (635–651) pls. ii & iii. [*Orthoptera.*] **1112a**

Reitter, E. Neue *Coleopteren* aus Aegypten. Bull. Soc. ent. Egypte Le Caire **6** 1915 (135–137). **1113**

Reitter, E. Beitrag zur Kenntnis der blinden *Tapinopterus*-arten. Wien. ent. Zeit. **33** 1914 (261–263). [*Coleoptera.*] **1113a**

Reitter, E. Zwei neue Silphiden. Wien. ent. Zeit. **33** 1914 (263 264). [*Coleoptera.*] **1113b**

Reitter, E. Drei neue Carabiciden. Wien. ent. Zeit. **33** 1914 (264–266). [*Coleoptera.*] **1113c**

Reitter, E. *Athous* (subg. *Grypocarus* Thoms.) *sardiniensis* sp. n. Wien. ent. Zeit. **33** 1914 (266). [*Coleoptera.*] **1113d**

Reitter, E. Zwei neue *Coleopteren* aus Transbaikalien und Mesopotamien. Wien. ent. Zeit. **33** 1914 (267 268). **1113e**

Rennie, J. On the biology and economic significance of *Tipula paludosa.* Ann. appl. Biol. Cambridge **3** 1917 (116–137) pls. xviii–xx. [*Diptera.*] **1114**

Reverdin, J. L Notes sur les genres *Hesperia* et *Carcharodus.* Bull. Soc. Lép. Genève **2** 1913 (212–237) pls. xxi xxii. [*Lepidoptera.*] **1114a**

Reverdin, J. L. *Adopea nova* mihi species nova. Bull. Soc. Lép. Genève **3** 1916 (122–128). [*Lepidoptera.*] **1115**

Reverdin, J. L. *Lycaena alexis* Poda (= *cyllarus* Rott.) aberrations prises à Baumaroche. Bull. Soc. Lép. Genève **3** 1917 (189–192) pl. ix. (*Lepidoptera.*] **1116**

Reverdin, L. L. Note sur *Erynnis comma* L., ses variétés et ses aberrations. Bull. Soc. Lép. Genève **3** 1917 (193–209). [*Lepidoptera.*] **1117**

Reverdin, J. Note sur l'armure génitale mâle chez *Lycaena argus* L. et ses variétés. [In Oberthür] Ét. Lép. comp. **14** 1917 (17–30) 2 pls. [*Leipdoptera.*] **1118**

Reynolds, L. R. *vide* Blaisdell & Reynolds.

Rhe-Philipe, G. W. V. de. The butterflies of Lahore. J. N. H. Soc. Bombay **25** 1917 (136–142). [*Lepidoptera.*] **1119**

Ricardo, Gertrude. New species of Tabanidae from Australia and the Fiji islands. Ann. Nat. Hist. London **19** 1917 (207–224). [*Diptera.*] **1120**

Ricardo, G. New species of *Haematopota* from India. Ann. Nat. Hist. Lordon **19** 1917 (225 226). [*Diptera.*] **1121**

Rich, S. G. The respiratory organs of dragon-fly larvae. S. Afric. Journ. Sc. **17** 1917 (600–602). [*Paraneuroptera.*] **1122**

Riedel, M. P. Die paläarktischen Arten der *Dipteren-* (Nematocera polyneura) Gattung *Tipula* L. Abh. Lehrerver. Crefeld 1913 (123 pp.) **1122a**

Riley, W. A. Dr. Nott's theory of insect causation of disease. J. Parasitol. Urbana **1** 1914 (37–39). **1123**

Ringdahl, O. Fyndorter för *Diptera.* Ent. Tidskr. Uppsala **38** 1917 (302–311). **1124**

Ripley, L. B. Notes on the feeding habits of adult Chrysopidae. Ent. News Philadelphia **28** 1917 (35–37). [*Neuroptera.*] **1125**

Ris, F. Libellen aus Deutsch-Ostafrika und Uganda. Rev. Suisse Zool. Genève 25 1917 (145–151). [*Paraneuroptera.*] **1126**

Ris, F. Eine neue Agrioniden-Gattung der „Légion Podagrion" (Odonata) aus China. 's Gravenhage Tyds. Ent. **60** 1917 (185–191). [*Paraneuroptera.*] **1127**

Roberts, E. W. The olfactory sense in insects. Trans. Amer. Micr. Soc. **34** 1915 (284–290). **1128**

Robertson, W. R. B. Chromosome studies iv. A deficient supernumerary accessory chromosome in a male of *Tettigidea parvipennis.* Kansas Univ. Sci. Bull. Lawrence **10** 1917 (275–283). 3 pls. [*Orthoptera.*] **1129**

Robinson, Elizabeth. Coccidae of the Philippine islands. Philippine J. Sci. D **12** 1917 (1–47) pls. i–vi. [*Homoptera.*] **1130**

Rockwood, L. P. *Sporotrichum globuliferum* Speg., a natural enemy of the alfalfa weevil. J. Econ. Ent. Concord N.H. **9** 1916 (493–499). [*Coleoptera.*] **1130a**

Röber, J. *vide* Seitz, A.

Roepke, W. Eenige opmerkingen over twee Javaansche Canthariden: Mylabris pustulata. Thunb. en Epicauta ruficeps. III. [Einige Bemerkungen über zwei javanische Canthariden: *Mylabris pustulata* Thunb. und *Epicauta ruficeps.* III.] 's Gravenhage Tydschr. Ent. **60** 1917 (252–267) 2 Taf. [*Coleoptera.*] **1131**

Roepke, W. Das Gespinst von Parasemidalis (*Neuroptera*: Coniopterygidae). Leiden Zool. Med. **3** 1917 (274) Fig. **1132**

Rohwer, S. A. Two bethylid parasites of the pink boll-worm. Insec. inscit. Washington **5** 1917 (1 and 2). [*Hymenoptera.*] **1133**

Rohwer, S. A. Descriptions of thirty-one new species of *Hymenoptera.* P.U.S. nat. Mus. Washington **53** No. 2195 1917 (151–176). **1134**

Rohwer, S. A. A report on a collection of *Hymenoptera* (mostly from California) made by W. M. Giffard. P.U.S. nat. Mus. Washington **53** 1917 No. 2202 (233–249). **1135**

Rohwer, S. A. Two new species of *Macrophya.* Ent. News Philadelphia **28** 1917 (264–266). [*Hymenoptera.*] **1136**

Rohwer, S. A. A new bee of the genus *Dianthidium.* Washington D.C. Proc. ent. Soc. **18** 1916 (192). [*Hymenoptera.*] **1137**

Rohwer, S. A. A nearctic species of *Dolichurus.* Washington D. C. Proc. ent. Soc. **18** 1917 (212). [*Hymenoptera.*] **1138**

Rohwer, S. A. *Diprion simile* in North America. Washington D. C. Proc. ent. Soc. **18** 1917 (213). [*Hymenoptera.*] **1139**

Rohwer, S. A. and **Fagan,** Margaret M. The type species of the genera of the Cynipoidea, or the gall-wasps and parasitic cynipoids. P. U. S. nat. Mus. Washington **53** No. 2208 1917 (357–380.) [*Hymenoptera.*] **1140**

Rohwer, S. A. *vide* Gahan and Rohwer.

Roman, A. Skånska parasitsteklar. Ent. Tidskr. Uppsala **38** 1917 (260–284). [*Hymenoptera.*] **1141**

Roman, A. Schlupfwespen aus Amazonien. Ark. Zool. Stockholm **11** No. 4 1917 (24). 7 text figs. [*Hymenoptera.*] **1142**

Roman, A. Braconiden aus den Färöern. Ark. Zool. Stockholm **11** No. 7 1917 (10). [*Hymenoptera.*] **1143**

Roth, H. L. Observations on the growth and habits of the stick insect, *Carausius morosus* Br.; intended as a contribution towards a knowledge of variation in an organism which reproduces itself by the parthenogenetic method. Tr. ent. Soc. London **1916** 1917 (345–386). [*Orthoptera.*] **1144**

Rothschild, *Hon.* N. C. Convergent development among certain ectoparasites. President's address. Pr. ent. Soc. Lond. **1916** 1917 (cxli–clvi). **1145**

Rothschild, *Hon.* N. C. On *Xenopsylla aequisetosus* Enderl. (1901). Ent. Mo. Mag. London **53** 1917 (32 and 33). [*Aphaniptera.*] **1146**

Rothschild, *Hon.* N. C. Report on the Siphonaptera collected by the British ornithologists' union expedition and the Wollaston expedition in Dutch New Guinea. Rep. B.O.U. Exp. etc. **2** 1916 No. 12 (1). [*Aphaniptera.*] **1147**

Rothschild, *The Lord. Lepidoptera* collected by the British Ornithologists' union and the Wollaston expeditions in the Snow Mountains, Southern Dutch New Guinea. Rep. B.O.U. Exp. New Guinea **2** London 1916 No. xv. (1–481 sep-pag.) 2 pls. **1148**

Rothschild, W., *The Lord.* Supplemental notes to Mr. Charles Oberthür's Faune des *Lépidoptères* de la Barbarie, with lists of the specimens contained in the Tring museum. Novit. zool. Tring **24** 1917 (61–120 325–373 393–409). **1149**

Rothschild, *The Lord.* On some apparently new Notodontidae. Novit. zool. Tring **24** 1917 (231–264) pls. iii–viii. [*Lepidoptera.*] **1150**

Rothschild, *The Lord.* On the genera *Melanothrix. Drepanojana, Melanergon, Paracydas, Cotana, Hypercydas, Epicydas* and *Nervicompressa* of the family Eupterotidae with descriptions of new forms. Novit. zool. Tring **24** 1917 (463–474) pls. xi & xii. [*Lepidoptera.*] **1151**

Rothschild, *The Lord.* Some new moths of the families *Arctiidae* and *Eupterotidae.* Novit. zool. Tring **24** 1917 (475–492). [*Lepidoptera.*] **1152**

Rothschild, *Lord, vide* Seitz, A.

Roubaud, E. Observations biologiques sur *Nasonia brevicornis* Ashm., chalcidide parasite des pupes de Muscides. Déterminisme physiologique de l'instinct de ponte; adaptation à la lutte contre les glossines. Bull. Sci. France Belgique Paris **50** 1917 (425–439). [*Hymenoptera.*] **1153**

Roubaud, E. Le venin et l'évolution paralysante chez les *Hyménoptères* prédateurs. Bull. biol. France Belgique Paris **51** 1917 (391–419). **1154**

Roubaud, E. Précisions sur *Phormia azurea* Fall., Muscide à larves hémophages parasites des oiseaux d'Europe. Bull. biol. France Belgique Paris **51** 1917 (420–430) pl. v. [*Diptera.*] **1155**

Roubaud, E. Auto-inoculation et développement primaire, dans les muqueuses buccales, de la larve du Gastrophile équin (oestre du cheval). Paris C.R. Ac. Sci. **164** 1917 (453–455). [*Diptera.*] **1156**

Roubaud, E. Les Anophèles français, des régions non palustres, sont-ils aptes à la transmission du paludisme? Paris C.R. Acad. Sci. **165** 1917 (401–403). [*Diptera.*] **1157**

Roubaud, E. and **Villeneuve,** J. Contribution à l'étude des espèces du genre *Anacamptomyia* Bischof. Rev. Zool. afric. **4** 1914 (121–128). [*Diptera.*] **1158**

Saalas, U. Die Fichtenkäfer Finnlands. Studien über die Entwicklungsstadien, Lebensweise und geographische Verbreitung der an *Picea excelsa* Linn. lebenden *Coleopteren,* nebst einer Larvenbestimmungstabelle. Ann. Ac. Fenn. Ser. A **8** No. 1 Helsinki 1917 (xxiv + 547) 9 pls. & map. **1159**

Sagarra, I. de. Instruccions per als recol-lectors d'insectes. Mus. Barc. Op. zool. Barcelona **4** 1918 (1–100). **1160**

Sagarra, I. de. El laboratori d'entomologia del museu. Annuar. Junta Ci. Nat. Barcelona **2** 1917 (279–299) pl. **1161**

Sahlberg, J. Odo Morannal Reuter. Några minnesord. Ent. Tidskr. Uppsala **38** 1917 (62–96) pl. **1162**

Salm, A. Muskieten in de Bandoengsche Hoogvlakte [Muskiten in der Bandoengschen Hochebene.] Batavia Geneesk. Tydschr. Ned. Ind. **57** 1917 (749–753) 2 Taf. [*Diptera.*] **1163**

Sanchez, A. *vide* Bohigas & Sanchez.

Sanders, J. G. and **De Long,** D. M. The Cicadellidae of Wisconsin, with description of new species. Ann. ent. Soc. Amer. **10** 1917 (79–95) pls. viii & ix. [*Homoptera.*] **1164**

Sands, W. R. Observations on the cotton stainer in St. Vincent. West Ind. Bull. Barbados **16** 1917 (235–255). [*Heteroptera.*] **1165**

Santschi, F. Description de quelques nouvelles fourmis. Ann. Soc. Argent. Buenos Aires **83** 1917 (277–283). [*Hymenoptera.*] **1166**

Santschi, F. Description d'une nouvelle reine de formicide du genre *Aenictus* Shuckard. Ann. Soc. ent. France **85** 1917 (277–278) pl. i. [*Hymenoptera.*] **1167**

Santschi, F. Fourmis nouvelles de la colonie du Cap, du Natal et de Rhodesia. Ann. Soc. ent. France **85** 1917 (279–296). [*Hymenoptera.*] **1168**

Sarra, R. La variegana (*Olethreutes variegana* Hb.) ed i suoi parassiti. Boll. Lab. Portici **12** 1917 (175–187). **1169**

Sarra, R. Intorno ad un *Imenottero* tentredinide (*Cimbex 4-maculata* Müll.) dannoso al mandorlo. Boll. Lab. Portici **12** 1917 (275–286). **1170**

Sasaki, C. Tsuwabuki-senyobai no ingu. [Genitalia of *Trypeta* sp. (?) infesting *Senecio koempferi.*] Collection of Essays for Mr. Y. Nawa 1917 (58–61). [*Diptera.*] **1171**

Sasaki, C. Hanmyo no yochu. [On the larva of *Cicindela litterifera* Chaud.] Konch. Sek. Gifu **21** 1917 (4–6). [*Coleoptera.*] **1172**

Sasaki, C. Tamamaishu ni tsuite. [On the double cocoon race of silkworms.] Tokyo Ni. Sanshi Kw. Ho. **1917** (887–888). [*Lepidoptera.*] **1173**

Saunders, L. G. *vide* Brittain & Saunders.

Scammell, H. B. The cranberry girdler. Bull. U.S. Dep. Agric. Ent. **554** 1917 (19 pp.) 7 pls. [*Lepidoptera.*] **1174**

Schaeffer, C. On some North-American Cleridae. J. N. York ent. Soc. **25** 1917 (129–134). [*Coleoptera.*] **1175**

Schaeffer, C. On *Merium* and some blue *Callidium.* J. N. York. ent. Soc. **25** 1917 (183–187). [*Coleoptera.*] **1176**

Schaeffer, C. On some new and known Melandryidae. Canad. Entom. London Can. **49** 1917 (357–359). [*Coleoptera.*] **1177**

Schenkling, S. Neue Beiträge zur Kenntnis der Cleriden. vi. Ent. Mitt. Berlin **6** 1917 (282). [*Coleoptera.*] **1178**

Schierbeek, A. On the setal pattern of caterpillars and pupae. Thesis. Leiden 1917 (2 + 157) 5 pls. [cf. **1444** last year.] [*Lepidoptera.*] **1179**

Schierbeek, A. De beteekenis van het setale patroon der rupsen voor de phylogenie. [Die Bedeutung des setalen Musters der Raupen für die Phylogenie.] Handl. Ned. Nat. Geneesk. Congres **16** 1918 (286–294). [*Lepidoptera.*] **1180**

Schierbeek, A. Over het setale patroon der rupsen. II. [On the setal pattern of caterpillars. II] Amsterdam Versl. Wis. Nat. Afd. K. Akd. Wet. **25** 1917 (1305–1309) (Dutch) Amsterdam Proc. Sci. K. Akad. Wet. **19** 1917 (1156–1161) (English). [*Lepidoptera.*] **1181**

Schmitz, H. Drei neue Termiten vom belgischen Kongo. 's Gravenhage Tydschr. Ent. **60** 1917 (225–231). [*Isoptera.*] **1182**

Schmitz, H. Ueber eine brachyptere Limosina-Art aus Holländisch Limburg wahrscheinlich *Limosina pseudonivalis* Dahl. 's Gravenhage Tydschr. Ent. **60** 1917 (232–237). [*Diptera.*] **1183**

Schmitz, H. *Anommonia,* eine neue myrmecophile Borboriden-Gattung aus Kamerun. Leiden Zool. Med. **3** 1917 (121–126) 3 Textabb. [*Diptera.*] **1184**

Schmitz. H. Zur Kenntnis der Heleomyzinen von Holländisch Limburg. Heerlen, Natuurhist. Genootschap in Limburg, Mededeelingen **1916** 1917 (117–131) 1 Taf. [*Diptera.*] **1185**

Schmitz, H. Die Phoriden von Holländisch Limburg. Heerlen Natuurhistorisch genootschap in Limburg Mededeelingen **1917** (79–150). [*Diptera.*] **1186**

Schött, H. Results of Dr. E. Mjöberg Swedish Scientific Expeditions to Australia 1910–1913. 15. *Collembola.* Ark. Zool. Stockholm **11** No. 8 1917 (60) 4 pls. 57 textfigs. **1187**

Scholz, M. F. R. Dritter Beitrag zur Kenntnis und Verbreitung paläarktischer Wasserkäfer. Ent. Mitt. Berlin **6** 1917 (178–181). [*Coleoptera.*] **1188**

Scholz, M. F. R. Vierter Beitrag zur Kenntnis und Verbreitung paläarktischer Wasserkäfer. Ent. Mitt. Berlin **6** 1917 (250–258) pl. vii. [*Coleoptera.*] **1189**

Schouteden, H. Cas de mimétisme chez les *Hémiptères* africains. Rev. zool. afric. Bruxelles **4** 1916 (251–258). **1190**

Schouteden, H. *Palophus leopoldi* n. sp. Rev. zool. afric. **4** 1916 (265–268). [*Orthoptera.*] **1191**

Schouteden, H. *Phyllontocheila* nouveaux d'Afrique. Rev. zool. afric. Bruxelles **4** 1916 (271–277). [*Heteroptera.*] **1192**

Schouteden, H. Un genre nouveau des Tessaratomiens. Rev. zool. afric. Bruxelles **4** 1916 (278 279). [*Heteroptera.*] **1193**

Schouteden, H. Pentatomides nouveaux du Congo. Rev. zool. afric. Bruxelles **4** 1916 (280–284). [*Heteroptera.*] **1194**

Schouteden, H. Deux Pentatomides nouveaux de l'Afrique orientale anglaise. Rev. zool. afric. Bruxelles **4** 1916 (285–287). [*Heteroptera.*] **1195**

Schouteden, H. Tingides du Congo belge. Rev. zool. afric. Bruxelles **4** 1916 (288–297). [*Heteroptera.*] **1196**

Schouteden, H. Pentatomides nouveaux du Congo belge. Rev. zool. afric. Bruxelles **4** 1916 (298–313). [*Heteroptera.*] **1197**

Schouteden, H. Liste des Buprestides du Congo belge. Rev. zool. afric. **4** 1916 (320–338). [*Coleoptera.*] **1198**

Schouteden, H. — Sur quelques *Synagris* du Congo belge. Rev. zool. afric. Bruxelles **5** 1916 (91–96). [*Hymenoptera.*] **1199**

Schouteden, H. Odonates récoltés par le Dr. J. Maes dans la région du lac Léopold. ii. Rev. zool. afric. Bruxelles **5** 1917 (103–108). [*Paraneuroptera.*] **1200**

Schouteden, H. Un nouveau *Palophus* de l'Afrique orientale anglaise. Rev. zool. Afric. Bruxelles **5** 1917 (109–111) [*Orthoptera.*] **1201**

Schouteden, H. Note sur quelques Coréides du Congo. Rev. zool. afric. Bruxelles **5** 1917 (163–165). [*Heteroptera.*] **1202**

Schüffner, W. Die Brutplätze der Mücken, deren Behandlung und kurze Bemerkungen über die Aussichten einer Malariabekämpfung. Batavia Geneesk. Tydschr. Ned. Ind. **56** 1916 (1013–1026) (Deutsch); Buitenzorg Mededeelingen Burgelyke geneeskundige dienst Nederlandsch. Indie **1917** 4 (48–62) (Holländisch & Deutsch). [*Diptera.*] **1203**

Schüffner, W. en **Heyden, H. van der.** De Anophelinen in Nederlandsch Indië. [Die Anopheliden in niederländisch-Indien.] Batavia Geneesk. Tydschr. Ned. Ind. **56** 1916 (381–396 mit 1 Taf.) (Holländisch); Buitenzorg Mededeelingen Burgelyke geneeskundige dienst Nederlandsch-Indië **1917** 4 (25–41 1 Taf.) (Holländisch und Deutsch). [*Diptera.*] **1204**

Schüffner, W. und **Swellengrebel,** N. H. Die Anopheliden in Deli im Verband mit der Verbreitung der Malaria. Buitenzorg Mededeelingen burgerlyke geneeskundige dienst Nederlandsch Indië **1917** 4 (1–24) (Deutsch und Holländisch). [*Diptera.*] **1205**

Schuhmacher, F. Brutpflege bei der Wanze *Clinocoris griseus* L. Ent. Mitt. Berlin **6** 1917 (243–249). [*Heteroptera.*] **1206**

Schultze, W. Fourth contribution to the *Coleoptera* fauna of the Philippines. Philippine J. Sci. D. **12** 1917 (249–258) pl. **1207**

Schutze, K. T. *Argyresthia illuminatella.* Deutsche ent. Zs. Iris. **31** 1917 (4–23). [*Lepidoptera.*] **1208**

Schweiz, —. The western and northern limit of *Glossina morsitans* in northern Katanga. Bull. ent. Res. London **8** 1917 (165–168) map. *Diptera.*] **1209**

Schuyt, P. J. M. Mededeeling over Micro's. [Mitteilung über *Microlepidopteren.*] 's Gravenhage Tydschr. Ent. **60** 1917 (xiv xvi). **1210**

Scott, H. Corylophidae from the Seychelles and Rangoon. Ann. Nat. Hist. London **19** 1917 (1–33) pls. i–v. (*Coleoptera.*] **1211**

Scott, H. Notes on Nycteribiidae, with descriptions of two new genera. Parasitology Cambridge **9** 1917 (593–610) pl. xxiv. [*Diptera.*] **1212**

Seabra, F. de. Études sur les maladies et les parasites du Cacaoyer et d'autres plantes cultivées à S. Thomé. Mem. Soc. portugaise Lisbonne **3** fasc. 1 1917 (1–28) pl. i. [*Homoptera.*] **1213**

Seamans, H. L. A new species of *Tropidia* from Montana. Ent. News Philadelphia **28** 1917 (342). [*Diptera.*] **1214**

Seitz, A. Nymphalidae (continued). Grossschmetterl. **5**; **Röber,** J. pp. 481–482; 497–507; **Fruhstorfer,** H. pp. 510–532; **Seitz,** A. pp. 533–537 **Fruhstorfer,** pp. 538–544; **Röber,** pp. 545–550; **Fruhstorfer,** pp. 551–576; **Röber,** pp. 577–592; Faun. exot. americ. 1915–1916. [*Lepidoptera.*] **1214a**

Seitz, A. Erycinidae. Grossschmetterlinge der Erde. Fauna americana **5** 1916 1917 (617–638). [*Lepidoptera.*] **1214b**

Seitz, A. Grossschmetterlinge . . . Fauna exotica, americana **6** (33–36); **Draudt** (37–217) 1915 & 1917. (*Lepidoptera.*] **1214c**

Seitz, A. Grossschmetterlinge der Erde. Faun. exot. **10** 1914 etc. pp. 121–124; **Draudt** M. pp. 135–223; **Seitz,** pp. 224–235; Lord **Rothschild,** pp. 236–263; **Seitz,** pp. 263–291; **Strand,** E., pp. 292–344. Spinner und Schwärmer des indo-australischen Gebiets. Stuttgart 1914–1917. [*Lepidoptera.*] **1214d**

Seitz, A. Grossschmetterlinge . . . Die indoaustralischen Spanner. Fauna. exot. Indo-austral. **12** pp. 1–4, pls. i & iv. **1214e**

Seitz. Grossschmetterlinge . . . *vide etiam* **Fruhstorfer, Grünberg, Prout, Röber.**

Sell, R. A. Notes on the twelve-spotted cucumber beetle. J. Econ. Ent. Concord N. H. **9** 1916 (551–556). [*Coleoptera.*] **1214f**

Sergent, Edm. et **Sergent,** Et. Nouvelle méthode de destruction des moustiques par l'alternance de leurs gîtes. Paris C. R. Acad. Sci. **165** 1917 (436). [*Diptera.*] **1215**

Shaffer, E. L. Mitochondria and other cytoplasmic structures in the spermatogenisis of *Passalus cornutus.* Biol. Bull. Woods Hole **32** 1917 (407–434) 4 pls. [*Coleoptera.*] **1216**

Shannon, H. T. Autumn migrations of butterflies. Amer. Mus. J. New York **17** 1917 (33–40). [*Lepidoptera.*] **1217**

Sharp, D. Studies in Rhynchophora. i, tribe Pseudobagoini. Ent. Mo. Mag. London **53** 1917 (26–31). [*Coleoptera.*] **1218**

Sharp, D. Studies in Rhynchophora. ii. The British Bagoini. Ent. Mo. Mag. London **53** 1917 (100–108). [*Coleoptera.*] **1219**

Sharp, D. Insecta. Zoological Record. London **52** 1917 (216 pp. sep. pag.). **1220**

Sheldon, W. G. *Peronea cristana* its life-history, habits of the imago, distribution of the various named forms, and some speculations on the present trend of its variation. Entomologist London **50** 1917 (217–222 etc.). [*Lepidoptera.*] **1221**

Sheldon, W. G. The races of *Agriades Coridon* inhabiting the Albarracin Sierra and its vicinity. Ent. Rec. London **29** 1917 (1–3). [*Lepidoptera.*] **1222**

Shelford, R. W. C. [the late]. A naturalist in Borneo: edited by E. B. Poulton. London 1917 (xxviii + 331) 32 pls. 1223

Shelford, V. E. Elytral tracheation of the tiger-beetles (Cicindelidae). Trans. Amer. Micr. Soc. **34** 1915 (241–252). [*Coleoptera.*] 1224

Shelford, V. E. Color and color-pattern mechanism of tiger beetles. Illinois Biol. mon. **3** 1917 No. 4 (399–528) 32 pls. [*Coleoptera.*] 1225

Shinji, G. O. New aphids from California. Ent. News Philadelphia **28** 1917 (61–64) pl. vii. [*Homoptera.*] 1226

Shinji, G. O. Mating habit of the cottony cushion scale. Ent. News Philadelphia **28** 1917 (162–165). [*Homoptera.*] 1227

Shinji, G. O. The California species of *Myzus*, with the description of a new species. Canad. Entom. London Can. **49** 1917 (49–51). [*Homoptera.*] 1228

Shinji, G. O. A new species of *Amphrophora* from California. Canad. Entom. London Can. **49** (51). [*Homoptera.*] 1229

Shinji, G. O. Notes on aphids. Psyche Boston **24** 1917 (84–86). [*Homoptera.*] 1230

Shipley, A. E. Studies in insect life and other essays. London 1917 (xii + 338). 1231

Shoebotham, J. W. Notes on *Collembola*. Part iv. The classification of the *Collembola*: with a list of the genera known to occur in the British Isles. Ann. Nat. Hist. London **19** 1917 (425–436). 1232

Silvestri, F. Sulla *Lonchaea aristella* Beck. Boll. Lab. Portici **12** 1917 (123–146). [*Diptera.*] 1233

Silvestri, F. Descrizione di una specie di *Oscinosoma* osservato in fruttescenze di caprifico. Boll. Lab. Portici **12** 1917 (147–154). [*Diptera.*] 1234

Silvestri, F. Contributo alla conoscenza del Celiode dell nocciuola (*Coeliodes ruber* Marsh.). Boll. Lab. Portici **12** 1917 (155–174). [*Coleoptera.*] 1235

Silvestri, F. Contribuzione alla conoscenza del genere *Centrobia* Förster. Boll. Lab. Portici **12** 1917 (245–265). [*Hymenoptera.*] 1236

Silvestri, F. Descrizione e notizie biologiche di due *Imenotteri* calcididi parassiti di uova di Cicale. Boll. Lab. Portici **12** 1917 (252–265). 1237

Silvestri, F. Il genere *Thysanus* Walker. Boll. Lab. Portici **12** 1917 (266–271). [*Hymenoptera.*] 1238

Silvestri, F. Contribuzione alla conoscenza dei Termitidi e termitofili dell' Africa occidentale. Boll. Lab. Portici **12** 1917 (287–346). [*Aptera.*] 1239

Silvestri, F. Un genere e due nuove specie di Calotermitidi dell'Eritrea. Boll. Lab. Portici **12** 1917 (347–351). [*Isoptera.*] 1240

Sinton, J. A. The anopheline mosquitos of the Kohat district. Ind. J. med. Res. Calcutta **5** 1917 (195–209) [*Diptera.*] 1241

Sjöstedt, Y. Results of Dr. E. Mjöbergs swedish scientific expeditions to Australia 1910–1913. 16. *Odonata.* Ark. Zool. Stockholm **11** No. 11 1917 (44) 4 pls. textfig. [*Paraneuroptera.*] 1242

Sjöstedt, Y. Odonaten aus Madagascar eingesammelt von Dr. W. Kaudern 1911–1912. Ark. Zool. Stockholm **11** No. 13 1917 (12) pl. [*Paraneuroptera.*] 1243

Sjöstedt, Y. Odonaten aus Abessinian, Ost- und Westafrica. Ark. Zool. Stockholm **11** No. 14 1917 (27) 5 pls. 2 textfigs. [*Paraneuroptera.*] 1244

Sjostedt, Y. Gryllides récoltés au Katanga par le Dr. Sheffield Neave. Rev. zool. afric. Bruxelles **5** 1917 (141–152). [*Orthoptera.*] 1245

Skinner, H. *Lycaena lygdamus* Doubleday and its races with a description of a new one. Ent. News Philadelphia **28** 1917 (212–214). [*Lepidoptera.*] 1246

Skinner, H. New species of *Lepidoptera.* Ent. News Philadelphia **28** 1917 (328–329). 1247

Smit, C. W. H. Note on the feeding habits of a ladybird larva. S. Afric. Journ. Sc. **13** 1917 (302–305). [*Coleoptera.*] 1248

Smith, H. E. Notes on New England Tachinidae, with the description of one new genus and two new species. Psyche Boston **24** 1917 (54–58). [*Diptera.*] **1249**

Smith, H. E. Five new species of north-American Tachinidae. Psyche Boston **24** 1917 (137–141). [*Diptera.*] **1250**

Smith, H. S. The habit of leaf-oviposition among the parasitic *Hymenoptera.* Psyche Boston **24** 1917 (63–68). **1251**

Smith, H. S. On the life-history and successful introduction into the United States of the Sicilian mealy-bug parasite. J. Econ. Ent. Concord **10** 1917 (262–268) pl. xiii. [*Hymenoptera.*] **1252**

Smith, H. S. An attempt to redefine the host relationships exhibited by entomophagous insects. J. Econ. Ent. Concord N. H. **9** 1916 (477–486). **1252a**

Smits van Burgst, C. A. L. Naamlyst der in de Ichneumonen-collectie van het Ryk aanwezige Genera en species der familie Ichneumonidae. [Verzeichnis der in der Ichneumonen-Sammlung der Niederlande vorhandenen Genera und Species der Familie Ichneumonidae.] 's Hage (Luctor et Emergo) [1918] (48). 24 cm. [*Hymenoptera.*] **1253**

Smits van Burgst, C. A. L. *Bracon discoideus* Wesm. (Hym.), een parasiet van den appelbloesemkever. (Anthonomus pomorum L.) [*Bracon discoideus* Wesm., ein Parasit des Apfelblütenstechers (Anthonomus pomorum)]. 's Gravenhage Ber. Ned. Ent. Ver. **5** 1917 (1–3). [*Hymenoptera.*] **1254**

Smits van Burgst, C. A. L. Tunisian *Hymenoptera.* **1913** (37) 24 cm. **1254a**

Snell, J. An invasion of the caterpillars of the antler moth into Yorkshire. J. Board Agric. London **24** 1917 (523–526). [*Lepidoptera.*] **1255**

Snyder, T. E. Notes on horseflies as a pest in southern Florida. Washington D.C. Proc. ent. Soc. **18** 1917 (208–211). [*Diptera.*] **1256**

South, R. The Noctuidae of Great Britain as arranged in the general collection at the Natural History Museum. Entomologist London **50** 1917 (178–185 etc.). [*Lepidoptera.*] **1257**

South, R. *vide* Wileman & South.

Stäger, R. Beitrag zur Kenntnis stengebewohnender Ameisen in der Schweiz. Rev. suisse Zool. Genève **25** 1917 (95–109). [*Hymenoptera.*] **1258**

Stage, H. J. *vide* Felt, E. P.

Standen, R. and **Coward,** T. A. Burnet and other reputed unpalatable moths eaten by birds. Lancash. Nat. Darwen **10** 1917 (133–136). [*Lepidoptera.*] **1259**

Stanton, A. T. and **Hacker,** H. P. The *Anopheles* of Malaya. iii. A new variety of *A. albotaeniatus* Theo. Bull. ent. Res. London **7** 1917 (273–275). [*Diptera.*] **1260**

Stark, Mary B. The occurrence of lethal factors in inbred and wild stocks of *Drosophila.* J. Exp. Zool. Philadelphia **19** 1915 (531–558) tables ff. [*Diptera.*] **1260a**

Stebbing, W. P. D. The locust in Cyprus. Ann. appl. Biol. Cambridge **4** 1917 (119–122). [*Orthoptera.*] **1261**

Steven, H. M. Contributions to the knowledge of the family Chermesidae. No. 1. The biology of the Chermes of spruce and larch and their relation to forestry. Proc. R. Soc. Edinburgh **37** 1917 (356–381). [*Homoptera.*] **1262**

Stevens, O. A. Preliminary list of North Dakota wasps, exclusive of Eumenidae. Ent. News Philadelphia **28** 1917 (419–423). [*Hymenoptera.*] **1263**

Stewart, B. A new British midge gall from county Durham. Vasculum Hexham **2** 1917 (120). [*Diptera.*] **1264**

Stöhr, L. M. An interesting case of instinct. Canad. Entom. London Can. **49** 1917 (161–163). [*Hymenoptera.*] **1265**

Stoner, D. A new species of *Apateticus* from Louisiana. Ent. News Philadelphia **28** 1917 (462). [*Heteroptera.*] **1266**

Stoner, D. Distributional notes on some Iowa *Pentatomoidea.* Des Moines Proc. Iowa Acad. Sci. **23** 1916 (303–307). [*Heteroptera.*] **1266a**

Storey, G. List of the *Hymenoptera* tubulifera and aculeata in the collection of the ministry of agriculture of Egypt. Bull. Soc. ent. Egypte **7** 1916 (110–117). **1267**

Strand, E. Ueber einige von Herrn E. Hintz gesammelte äethiopische *Hymenoptera* und *Lepidoptera*. Ent. Mitt. Berlin **6** 1917 (34–43). **1268**

Strand, E. H. Sauter's Formosa-Ausbeute. Ent. Mitt. Berlin **6** 1917 (312–316) pl. viii. [*Lepidoptera.*] **1269**

Strand, *vide* Seitz, A.

Strickland, E. H. The March fly (*Bibio abbreviatus*) in grain fields and as a pest of celery. Agric. Gaz. Canada **3** 1916 (600–603). [*Diptera.*] **1270**

Strindberg, H. Neue Studien über Ameisenembryologie. Zool. Anz. Leipzig **49** 1917 (177–197). [*Hymenoptera.*] **1271**

Strobell, E. C. *vide* Foot & Strobell.

Sturtevant, A. H. Genetic factors affecting the strength of linkage in *Drosophila*. Proc. Nation. Ac. Washington **3** 1917 (555–558). [*Diptera.*] **1272**

Suzuki, H. Sanran no kokyu kotoni tansangasu hasseiryo ni tsuite. [On the respiration of the silkworm eggs, and particularly on their expiration of carbonic acid gas.] Tokyo Sangyo Shikenjo Hokoku [Report of the Sericultural Institute] **2** 1917 (287–312). [*Lepidoptera.*] **1273**

Swaine, J. M. Canadian bark-beetles. Part i. Descriptions of new species. Bull. Dep. Agric. Ent. Canada Ottawa **14** 1917 (1–32). [*Coleoptera.*] **1274**

Swaine, J. M. Injurious shade tree insects of the Canadian prairies. Agric. Gaz. Canada **3** 1916 (215–220). **1275**

Swaine, J. M. The false tussock caterpillars on shade trees. Agric. Gaz. Canada **4** 1916 (1043–1047). [*Lepidoptera.*] **1276**

Swellengrebel, N. H. *Myzomyia rossii* Giles, *M. Ludlowi* Theob. en *M. indefinita* Ludl. [*Myzomyia rossii* Giles, *M. Ludlowi* Theob. und *M. indefinita* Ludl.] Batavia Geneesk. Tydschr. Ned. Ind. **57** 1917 (490–495) 2 Taf. (Holländisch); Buitenzorg Mededeelingen Burgelyke geneeskundige Dienst Ned. Ind. **1917** 4 (42–47) (Holländisch und Deutsch). [*Diptera.*] **1277**

Swellengrebel, N. H. *Myzomyia flava* n. sp. een nieuwe Anopheline voor Ned. Indië. [*Myzomyia flava* n. sp. eine neue Anophelide in Niederlandisch Indien.] Batavia Geneesk. Tydschr. Ned. Ind. **57** 1917 (807–809). [*Diptera.*] **1278**

Swellengrebel, N. H. De Anophelinen van Nederlandsch Oost-Indie. [Die Anophelinen von Niederländisch Ostindien.] Amsterdam Mededeelingen Koloniaal Instituut **7** Afdeeling Tropische Hygiene **3** 1916 (1–182) Textfig. und Taf. [*Diptera.*] **1278a**

Swellengrebel, N. H. *vide* **Schüffner, W.**

Swett, L. W. Geometrid notes. The genus *Dysstroma* Hübner. Canad. Entom. London Can. **49** 1917 (64–71). [*Lepidoptera.*] **1279**

Swett, L. W. A new species of *Euchlaena*. Canad. Entom. London Can. **49** 1917 (351). [*Lepidoptera.*] **1280**

Swezey, O. H. A note on "*Nesotocus giffardi*" Perkins. Honolulu Proc. Hawaiian Ent. Soc. **3** 1915 (57). [*Coleoptera.*] **1280a**

Swinhoe, C. New species of indo-malayan *Lepidoptera*. Ann. Nat. Hist. London **19** 1917 (331–342). **1281**

Swinhoe, C. New species of indo-malayan *Lepidoptera*. Ann. Nat. Hist. London **19** 1917 (409–416). **1282**

Swinhoe, C. New indo-malayan species of *Lepidoptera*. Ann. Nat. Hist. London **20** 1917 (157–166). **1283**

Swinhoe, C. New indo-malayan *Lepidoptera*. Ann. Nat. Hist. London **20** 1917 (407–412). **1284**

Takahashi, S. Daikon no meichu ni tsuite. [On the larva of *Hellna* [*Hellula*] *undalis.*] Konch. Sek. Gifu **21** 1917 (50–53). [*Lepidoptera.*] **1285**

Takizawa, M. Some new species of Coccinellidae. Sapporo Trans. Sapporo Nat. Hist. Soc. **6** 1917 (220–223). [*Coleoptera.*] **1286**

Talbot, G. *vide* Joicey, J. J.

Tams, W. H. T. *Euplexia lucipara* Linn.as represented in the British Isles and North America. Ento. Mo. Mag. London **53** 1917 (157) pl. iii. [*Lepidoptera.*] **1287**

Tanita, S. *vide* Kitajima, Y.

Taylor, F. H. Australian Tabanidae. No. ii. Sydney P. Linn. Soc. N.S.W. **41** 1917 (746–762). [*Diptera.*] **1288**

Taylor, F. H. *Sarcophaga froggatti* sp. n., a new sheep-maggot fly. Bull. ent. Res. London **7** 1917 (265). [*Diptera.*] **1289**

Taylor, Monica. The chromosome complex of *Culex pipiens*. Part ii, fertilisation. Q.J. Microsc. Sci. London **62** 1917 (287–301) pl. xx. [*Diptera.*] **1290**

Teodoro, G. Le esperienze del. dott. A. da Costa Lima sulla respirazione delle larve dei Culicidi. Atti Acc. Ven.-Trent. Padova **8** 1916 (95–97).. [*Diptera.*] **1291**

Teodoro, G. Alcune osservazioni sulle Cocciniglie. Atti Acc. Ven.-Trent. Padova **8** 1916 (147–149). [*Homoptera.*] **1292**

Theobald, F. V. The aphid of tea, coffee and cacao (*Toxoptera coffeae*). Bull. ent. Res. London **7** 1917 337–342). [*Homoptera.*] **1293**

Theobald, F. V. Notes on new and little known British Aphides. iii. Entomologist London **50** 1917 (76–82). [*Homoptera.*] **1294**

Thery, A. Buprestides nouveaux d'Egypte. Bull. Soc. ent. Egypte **1912** 1914 (129–132). **1295**

Théry, A. Description d'un *Eretmotus* nouveau du Maroc. Bull. Soc. ent. France **1917** 1918 (332). [*Coleoptera.*] **1296**

Thomas, W. A. A little known lantern fly injuring corn. (*Peregrinus maidis*, Ashm.). Agric. Exp. Sta. South Carolina Clemson College Bull. No. **174** 1914 (1–7) 8 ff. [*Homoptera.*] **1297**

Thompson, Caroline B. Origin of the castes of the common termite, *Leucotermes flavipes*. J. Morphol. Philadelphia **30** 1917 (83–136). [*Isoptera.*] **1298**

Thompson, W. R. Sur un *Diptère* parasite des isopodes terrestres (*Phyto melanocephala* Meig). C.R. Soc. Biol. Paris **80** 1917 (785–788). **1299**

Tillyard, R. J. The biology of dragonflies. (Odonata or *Paraneuroptera.*) Cambridge **1917** (xii + 396) 4 pls. **1300**

Tillyard, R. J. Further researches upon the problems of the radial and zygopterid sectors in the wings of Odonata, and upon the formation of bridges. Sydney P. Linn. Soc. N.S.W. **31** 1917 (871–887). [*Paraneuroptera.*] **1301**

Tillyard, R. J. On some new dragonflies from Australia and Tasmania. Proc. Linn. Soc. N.S.W. **42** 1917 (450–479) pl. xxiii. [*Paraneuroptera.*] **1302**

Tillyard, R. J. On the morphology of the caudal gills of the larvae of zygopterid dragonflies. Parts i-iv. Proc. Linn. Soc. N.S.W. Sydney **42** 1917 (pp. 31–112 606–632) pls. i-vi. [*Paraneuroptera.*] **1303**

Torre Bueno, J. R. de la. New York Scolopostethi. Ent. News Philadelphia **28** 1917 (65–68). [*Heteroptera.*] **1304**

Torre Bueno, J. R. de la. Life-history and habits of the larger waterstrider, *Gerris remigis* Say. Ent. News Philadelphia **28** 1917 (201–208). [*Heteroptera.*] **1305**

Torre Bueno, J. R. de la. Life history and habits of the margined water strider, *Gerris marginatus* Say. Ent. News Philadelphia **28** 1917 (295–301). [*Heteroptera.*] **1306**

Torre Bueno, J. R. de la. Life history of the northern *Microvelia*, *M. borealis* Bueno. Ent. News Philadelphia **28** 1917 (354–359) pl. xxv. [*Heteroptera.*] **1307**

Tothill, J. D. The introduction and establishment in Canada of the natural enemies of the brown-tail and Gipsy moths. Agric. Gaz. Canada **3** 1916 (111–116). **1308**

Tower, W. L. Inheritable modifications of the water relation in hibernation of *Leptinotarsa decemlineata*. Biol. Bull. Woods Hole. **33** 1917 (229–257). (*Coleoptera.*] **1309**

Townsend, C. H. T. New genera and species of American muscoid *Diptera.* Proc. biol. Soc. Washington **30** 1917 (43–50). **1310**

Townsend, C. H. T. Genera of the *Dipterous* tribe *Saracophagini.* Proc. biol. Soc. Washington **30** 1917 (189–198). **1311**

Townsend, C. H. T. A synoptic revision of the Cuterebridae, with synonymic notes and the description of one new species. Insec. inscit. Washington **5** 1917 (23–28). [*Diptera.*] **1312**

Townsend, C. H. T. New genera of *Amobiinae.* Insec. inscit. Washington **5** 1917 (157–164). [*Diptera.*] **1313**

Townsend, C. H. T. Indian flies of the subfamily Rhiniinae. Rec. Ind. Mus. Calcutta **13** 1917 (185–202). [*Diptera.*] **1314**

Townsend, C. H. T. The head and throat bots of american game animals. J.N. York ent. Soc. **25** 1917 (98–105). [*Diptera.*] **1315**

Townsend, C. H. T. Second paper on brazilian Muscoidea collected by Herbert H. Smith. Bull. Amer. Mus. New York **37** 1917 (221–233). [*Diptera.*] **1315a**

Townsend, C. H. T. The insect vector of uta, a Peruvian disease. J. Parasit. Urbana Ill. **2** 1915 (67–73) ff. A-D. [*Diptera.*] **1315b**

Treherne, R. C. The natural immunity or resistance of plants to insect attacks. Agric. Gaz. Canada **4** 1917 (855–859). **1316**

Treherne, R. C. The strawberry-root weevil in British Columbia. Canad. Entom. London Can. **49** 1917 (257–260). [*Coleoptera.*] **1317**

Tremoleras, J. Sobre cuatro casos teratológicos en *Coleópteros.* Physis Buenos Aires **3** 1917 (94–96). **1318**

Tremoleras, J. Description d'un carabique nouveau appartenant au genre *Ega* Cast. Physis Buenos Aires **3** 1917 (436). [*Coleoptera.*] **1319**

Tullgren, A. D. Filip Tryboms efterlämnade faunistiska anteckningar om svenska *Thysanoptera.* Ent. Tidskr. Uppsala **38** 1917 (33–61). **1320**

Tullgren, A. En enkel apparat för automatiskt vittjande av sällgods. Ent. Tidskr. Uppsala **38** 1917 (97–100) textfig. **1321**

Turati, E. Revisione delle *Syntomis* paleartiche a doppio cingolo giallo, e saggio di una classificazione delle varie specie e forme. Atti. Soc. ital. Milano **56** 1917 (179–232) pls. ii–viii. [*Lepidoptera.*] **1322**

Turati, E. Un genere nuovo alla fauna paleartica. Bull. Soc. ent. ital. Firenze **48** 1917 (109–117). [*Lepidoptera.*] **1323**

Turner, A. J. On some moths from Lord Howe and Norfolk Islands. Adelaide S. Aust. Trans. R. Soc. **41** 1917 (53–56). [*Lepidoptera.*] **1324**

Turner, A. J. Studies in Australian *Lepidoptera.* Adelaide S. Aus. Trans. R. Soc. **41** 1917 (57–120). **1325**

Turner, H. J. The genus *Pararge.* Pr. S. London ent. Soc. **1916-17** 1917 (7–17). [*Lepidoptera.*] **1326**

Turner, H. J. Shakespere and insects. Pr. S. London ent. Soc. **1916-17** 1917 (24–42). **1327**

Turner, R. E. New species of *Hymenoptera* in the British museum. Tr. ent. Soc. London **1917** 1917 (53–84). **1328**

Turner, R. E. On a braconid parasite of *Glossina.* Bull. ent. Res. London **8** 1917 (177). [*Hymenoptera.*] **1329**

Turner, R. E. Notes on fossorial *Hymenoptera* xxv, on new Sphecoidea in the British museum. Ann. Nat. Hist. London **19** 1917 (104–112). **1330**

Turner, R. E. Notes on the fossorial *Hymenoptera* xxvi, on the genus *Homonotus* Dahlb. Ann. Nat. Hist. London **19** 1917 (147–151). **1331**

Turner, R. E. Notes on fossorial *Hymenoptera* xxvii, on new species in the British museum. Ann. Nat. Hist. London **19** 1917 (317–326). **1332**

Turner, R. E. Notes on fossorial *Hymenoptera* xxviii, on new ethiopian species of *Bembex* in the British museum. Ann. Nat. Hist. London **19** 1917 (436–441). **1333**

Turner, R. E. A revision of the wasps of the genus *Tachytes* inhabiting the ethiopian region. Ann. Nat. Hist. London **20** 1917 (1–43). [*Hymenoptera.*] **1334**

Turner, R. E. Notes on the Braconidae in the British museum, i. Ann. Nat. Hist. London **20** 1917 (241–249). [*Hymenoptera.*] **1335**

Turner, R. E. Notes on fossorial *Hymenoptera*, xxix, on new ethiopian species. Ann. Nat. Hist. London **20** 1917 (289–297). **1336**

Turner, R. E. Notes on fossorial *Hymenoptera*, xxx, on new ethiopian Scoliidae. Ann. Nat. Hist. London **20** 1917 (351–356). **1337**

Turner, R. E. Notes on fossorial *Hymenoptera*. xxxi, on Psammocharidae in the British museum. Ann. Nat. Hist. London **20** 1917 (357–260). **1338**

Turner, R. E. On some of the Scoliidae, mostly Elidinae (*Hymenoptera*) in the South African Museum. Ann. S. Afric. Mus. **15** 1917 (455–463). **1339**

Turner, R. E., **Meade-Waldo,** G. and **Morley,** C. Report on the *Hymenoptera* collected by the British Ornithologists' Union expedition and the Wollaston expedition in Dutch New Guinea. B.O.U. Exp. New Guinea **1** London May 1915 (1–22 sep. pag.) pl. i. **1340**

Turner, R. E. and **Waterston,** J. Notes on the *Hymenopterous* families Bethylidae and Rhopalosomidae. Ann. Nat. hist. London **20** 1917 (101–107). **1341**

Uchida, S. Bird-infesting Mallophaga of Japan. iii. (Genus *Lipeurus*). Annot. zool. Japan Tokyo **9** 1917 (201–215). [*Lipoptera.*] **1342**

Uchida, S. Mallophaga from birds of Formosa. Tokyo J. Coll. Agric. **3** 1917 (171–188). [*Lipoptera.*] **1343**

Ulmer, G. (and others). Ueber W. Horns litauische entomologische Kriegsausbeute 1916 (besonders *Trichoptera*, *Ephemeroptera*, *Lepidoptera* und *Hymenoptera*). Ent. Mitt. Berlin **6** 1917 (289–312). **1344**

Urbahans, T. D. *Tetrastichus bruchophagi*, a recently described parasite of *Bruchophagus funebris*. J. Agric. Res. Washington **8** 1917 (277–282) pl. lxxviii. [*Hymenoptera.*] **1345**

Van Deventer, W. Handboek ten dienste van de Suikerriet-cultur. Tweede deel. De dierlijke Vijanden van het suikerriet en hunne parasiten. Amsterdam **1912** (308 + xii) 43 pls. **1346**

Van Duzee, E. P. Report upon a collection of *Hemiptera* made by Walter M. Giffard in 1916 and 1917, chiefly in California. Proc. Calif. Ac. Sci. San Francisco **7** No. 11 1917 (249–318). **1347**

Van Duzee, M. C. Descriptions of a few new *Diaphorus* from the western States. Psyche Boston **24** 1917 (33–39). [*Diptera.*] **1348**

Van Duzee, M. C. New North-American species of Dolichopodidae. Canad. Entom. London Can. **49** 1917 (337–342). [*Diptera.*] **1349**

Van Duzee, M. C. New North American Dolichopodidae. Ent. News Philadelphia **28** 1917 (123–128). [*Diptera.*] **1350**

Van Dyke, E. C. A new species of the genus *Anthophilax* Lec. J.N. York ent. Soc. **25** 1917 (36). [*Coleoptera.*] **1351**

Van Zwaluwenburg, R. H. Insects affecting coffee in Porto Rico. J. econ. Ent. Concord **10** 1917 (513–517). **1352**

Verity, R. Nuove osservazioni sui *Lepidotteri* Ropaloceri dell'isola d'Elba. Bull. Soc. ent. ital. Firenze **48** 1917 (175–193). **1353**

Verity, R. Contributo alle ricerche sull'epoca di comparsa dei *Lepidotteri* allo stato di completo sviluppo (Firenze) ii. Bull. Soc. ent. ital. **48** 1917 (194–200). **1354**

Verity, R. Une nouvelle méthode de montage et de conservation des *Lépidoptères* par séries. Bull. Soc. ent. France **1917** 1917 (312–316). **1355**

Vichmeyer, H. Anomalien am Skelette der Ameisen. Ent. Mitt. Berlin **6** 1917 (66–72). [*Hymenoptera.*] **1356**

Viereck, H. L. New species of bees of the genus *Andrena*, from equatorial Africa, in the American museum of

natural history. Bull. Amer. Mus. New York **37** 1917 (235–239). [*Hymenoptera.*] **1356a**

Viereck, H. L. Contributions to our knowledge of the bee genus *Perdita* Smith. Bull. Amer. Mus. New York **37** 1917 (241–242). [*Hymenoptera.*] **1356b**

Villeneuve, J. Myodaires supérieurs recueillis à Madagascar. Rev. zool. afric. Bruxelles **4** 1916 (191–209). [*Diptera.*] **1357**

Villeneuve, J. Descriptions d'Anthomyides nouveaux. Parasitol. Cambridge **9** 1917 (438–440). [*Diptera.*] **1358**

Villeneuve, J. Contribution à l'étude des espèces africaines du genre *Thelychaeta* Brauer-Berg. Ann. Soc. ent. France **85** 1917 (337–354). [*Diptera.*] **1359**

Villeneuve, J. Descriptions d'espèces Nouvelles de la famille des Cypselidae (Borboridae). Bull. Soc. ent. France **1917** 1917 (139–144). [*Diptera.*] **1360**

Villeneuve, J. Descriptions de deux Muscides nouveaux. Bull. Soc. ent. France **1917** 1917 (306–308). [*Diptera.*] **1361**

Villeneuve, J. Espèces nouvelles de *Diptères* de la famille des Cypselidae (*Borboridae*). Bull. Soc. ent. France **1917** 1918 (333–338). **1362**

Villeneuve, J. A new species of Tachinò-Oestrid from South Africa. (*Diptera*). Ann. S. Afric. Mus. **15** 1917 (465–468). **1363**

Villeneuve, J. *vide* Rouband and Villeneuve.

Von Porat, C. O. Nya fjärilsfynd i Jönköpingstrakten. Ent. Tidskr. Uppsala **38** 1917 (103–104). [*Lepidoptera.*] **1364**

Wagner, H. Beiträge zur *Coleopteren*fauna der Mark Brandenburg v. Ent. Mitt. Berlin **6** 1917 (259–273). **1365**

Wahlgren, E. Een amfibisk kollembol. Fauna och Flora Uppsala **1916** (114–118) textfig. [*Aptera.*] **1366**

Walden, R. H. Simple apparatus for insect photography. J. econ. Ent. Concord **10** 1917 (25–29) pl. i. **1367**

Walker, E. M. Notes on the Odonata of the vicinity of Go home bay, Georgian bay, Ontario. Contr. Canad. Biol. Ottawa 1915. (Suppl. **47**th Rep. Dep. Fisheries) (53–94) pls. iii-ix. **1368**

Walker, E. M. Seasonal irregularities in the occurrence of dragonflies. Canad. Entom. London Can. **49** 1917 (171–178). [*Paraneuroptera.*] **1369**

Walker, E. M. The known nymphs of the North-american species of *Sympetrum.* Canad. Entom. London Can. **49** 1917 (409–418) pls. xix and xx. [*Paraneuroptera.*] **1370**

Walker, E. L and **Barber,** M. A. Malaria in the Philippine islands. **1.** Experiments on the transmission of malaria with *Anopheles* (*Myzomyia*) *febrifer* sp. nov., *Anopheles* (*Pseudomyzomyia*) *rossii*, *Anopheles* (*Myzorhynchus*) *barbirostris*, *Anopheles* (*Myzorhynchus*) *sinensis*, and *Anopheles* (*Nyssorhynchus*) *maculatus.* [With bibliography.] Philippine J. Sci. Manila Sect. B. Trop. Med. **9** 1914 (381–439) tables. [*Diptera.*] **1371**

Walker, J. J. The new forest, June 1917. Ent. Mo. Mag. London **53** 1917 (169–173 and 212). **1372**

Wallace, A. R. *vide* Bagnall and Wallace.

Walsh, G. B. On the rarity and restricted distribution of animal—especially insect—species. Ent. Mo. Mag. London **53** 1917 (57–61 93–98). **1373**

Walsh, G. B. On the prep ration of insects as microscopic mounts. Vasculum, Hexham **2** 1916 (75–81). **1374**

Walton, C. L. Some farm insects observed in the Aberystwyth area, 1913–1916. Ann. appl. Biol. Cambridge **4** 1917 (4–14). **1375**

Walton, W. R. The tachinid genus *Argyrophylax* B. and B. Washington D.C. Proc. ent. Soc. **18** 1916 (189–192) pl. xiv. [*Diptera.*] **1376**

Wanach, B. Bemerkungen über Odonaten. Ent. Mitt. Berlin **6** 1917 (72–80). [*Paraneuroptera.*] **1377**

Warren, A. A study of the food habits of the hawaiian dragonflies or Pinau, with reference to their economic relation to other insects. Bull. Coll. Hawaii **3** 1915 (1–43) 3 pls. [*Paraneuroptera.*] **1378**

Warren, D. C. Mutations in *Drosophila busckii* Coq. Amer. Nat. New York **51** 1917 (699–703). [*Diptera.*] **1379**

Wasmann, E. Myrmekophile und termitophile *Koleopteren* aus Ostindien, gesammelt hauptsächlich von P. J. Assmuth S. J. und J. B. Corporaal. i, Paussidae und Clavigerinae. 's Gravenhage Tydschr. Ent. **60** 1917 1918 (382–408) 3 Taf. **1380**

Watanabe, K. Kasan no santai wo kozosuru kikwan no kikei ni tsuite no kenkyu. [On the deformed organs of silkworms.] Sangyo Shinpo [Sericultural magazine.] Tokyo **291** 1917 (4–9 with 6 pls.) **296** 1917 (4–14 with 2 pls.). [*Lepidoptera.*] **1381**

Waterston, J. Notes on the morphology of chalcidoidea bred from *Calliphora.* Parasitology Cambridge **9** 1917 (190–198). [*Hymenoptera.*] **1382**

Waterston, J. A new african louse (*Polyplax calva* n.sp.) from *Cricetomys.* Parasitology Cambridge **9** 1917 (199–202). [*Ellipoptera.*] **1383**

Waterston, J. Notes on Coccid-infesting Chalcidoidea. ii. Bull. ent. Res. London **7** 1917 (231–257). [*Hymenoptera.*] **1384**

Waterston, J. Notes on Coccid-infesting Chalcidoidea. iii. Bull. ent. Res. London **7** 1917 (311–325). [*Hymenoptera.*] **1385**

Waterston, J. A new species of *Paraphelinus* Perk., from British Guiana, with a discussion of the genus and the allied *Aphelinus,* Dalm. Bull. ent. Res. London **8** 1917 (43–58). [*Hymenoptera.*] **1386**

Waterston, J. Chalcidoidea bred from *Glossina* in the northern territories, Gold coast. Bull. ent. Res. London **8** 1917 (178 and 179). [*Hymenoptera.*] **1387**

Waterston, J. On a new species of *Docophoroides* Gigl. (*Eurymetopus* Tasch.) from an albatross (*Diomedea melanophrys*). Ent. Mo. Mag. London **53** 1917 (99). [*Ellipoptera.*] **1388**

Waterston, J. *vide* Turner and Waterston.

Watson, J. R. Life-history of the velvet-bean caterpillar (*Anticarsia gemmatilis* Hübner.) J. Econ. Ent. Concord N.H. **9** 1916 (521–528) pls. 39 40 ff. 36 37. [*Lepidoptera.*] **1388a**

Webb, J. L. and **Hutchison,** H. H. A preliminary note on the bionomics of *Pollenia rudis* Fabr. in America. Washington D.C. Proc. ent. Soc. **18** 1916 (197–199). [*Diptera.*] **1389**

Webster, R. L. Notes on two strawberry slugs, *Empria fragariae* Rohwer, *Empria maculata* Norton. Des Moines Proc. Iowa Acad. Sci. **23** 1916 (291–297) pl. vii. [*Hymenoptera.*] **1389a**

Wehrli, E. Für Basel und die Schweiz neue *Lepidoptera,* nebst einigen neuen Formen und biologischen Angaben. Verh. Ges. Basel **28** 1917 (236–254). **1390**

Weise, J. Chrysomeliden und Coccinelliden aus Nord-Neu-Guinea. 's Gravenhage Tydschr. Ent. **60** 1917 (192–224). [*Coleoptera.*] **1391**

Weiss, H. B. Some unusual orchid insects. Ent. News Philadelphia **28** 1917 (24–29) pl. iv. and v. **1392**

Weiss, H. B. Additions to the insects of New Jersey. No. 5. Ent. News Philadelphia **29** 1917 (214–221). **1393**

Weiss, H. B. Undesirable insect immigration into New Jersey. Canad. Entom. London Can. **49** 1917 (293–298) pl. xiv. **1394**

Weiss, H. B. *vide* Dickerson and Weiss.

Welander, E. Fjärilsfynd från gränstranterna av Kalmar och Jönköpings län. Ent. Tidskr. Uppsala **38** 1917 (212–216). [*Lepidoptera.*] **1395**

Welander, E. Bidrag till kännedomen om Odonatfannan i uoma Kalmar län. Ent. Tidskr. Uppsala **38** 1917 (101–102). [*Purancuroptera.*] **1396**

Welch, P. S. Further studies on *Hydromyza confluens* Loew. Ann. ent. Soc. Amer. Columbus **10** 1917 (35–45) pl. iii. [*Diptera.*] **1397**

Wells, Emma *vide* Gibson and Wells.

Wenrich, T. H. Synapsis and chromosome organisation in *Chorthippus* (*Stenobothrus*) *curtipennis* and *Trimerotropis suffusa.* J. Morphol. Philadelphia **29** 1917 (471–511) 3 pls. [*Orthoptera.*] **1398**

West, A. *Orchestes angustifrons* n.sp. Ent. Meddel. Kjøbenhavn **11** 1916 (24–27). [*Coleoptera.*] **1399**

Wheeler, W. M. The phylogenetic development of subapterous and apterous castes in the Formicidae. Proc. Nat. Ac. Washington **3** 1917 (109–117). [*Hymenoptera.*] **1400**

Wheeler, W. M. The North-american ants described by Asa Fitch. Psyche Boston **24** 1917 (26–29). [*Hymenoptera.*] **1401**

Wheeler, W. M. A new Malayan ant of the genus *Prodiscothyrea.* Psyche Boston **24** 1917 (29). [*Hymenoptera.*] **1402**

Wheeler, W. M. The temporary social parasitism of *Lasius subumbratus* Viereck. Psyche Boston **24** 1917 (167–176). [*Hymenoptera.*] **1403**

Wheeler, W. M. Notes on the marriage flights of some Sonoran ants. Psyche Boston **24** 1917 (177–180). [*Hymenoptera.*] **1404**

Wheeler, W. M. The pleometrosis of *Myrmecocystus.* Psyche Boston **24** 1917 (180–182). [*Hymenoptera.*] **1405**

Wheeler, W. M. The australian ants of the genus *Onychomyrmex.* Bull. Mus. Harvard Coll. Cambridge Mass. **60** 1916 (45–54) pls. i and ii. [*Hymenoptera.*] **1406**

Wheeler, W. M. The ants of Alaska. Bull. Mus. Harvard Coll. Cambridge Mass. **61** 1917 (15–22). [*Hymenoptera.*] **1407**

Wheeler, W. M. Australian antgenus *Myrmecorhynchus* and its position in *Camponotinae.* Adelaide S. Aust. Trans. R. Soc. **41** 1917 (14–19) pl. [*Hymenoptera.*] **1408**

Whitehouse, F. C. The Odonata of the Red deer district, Alberta. Canad. Entom. London Can. **49** 1917 (96–103). [*Paraneuroptera.*] **1409**

Whiting, F. W. The chromosomes of the common house mosquito, *Culex pipiens* L. J. Morphol. Philadelphia **28** 1917 (523–563) 7 pls. **1410**

Wickham, H. F. Some fossil beetles from the Sangamon peat. Amer. J. Sci. New Haven **44** 1917 (137–145). [*Coleoptera.*] **1411**

Wickham, H. F. New species of fossil beetles from Florissant, Colorado. P.U.S. nat. Mus. Washington **52** No. 2189 1917 (463–472) pls. xxxvii-xxxix. [*Coleoptera.*] **1412**

Wileman, E. A. Notes on japanese *Lepidoptera* and their larvae. Part 4. Philippine J. Sci. D **12** 1917 (229–245) 2 pls. **1413**

Wileman, A. E. and **South,** R. New species of Heterocera from Japan and Formosa in the British museum. Entomologist London **50** 1917 (25–29). [*Lepidoptera.*] **1414**

Wileman, A. E. and **South,** R. New species of Noctuidae and Geometridae from Formosa. Entomologist London **50** 1917 (53–57). [*Lepidoptera.*] **1415**

Wileman, A. E. and **South,** R. New species of Geometridae from the Philippines. Entomologist London **50** 1917 (100–102). [*Lepidoptera.*] **1416**

Wileman, A. E. and **South,** R. Five new species of Pyralidae, belonging to the subfamily Epipaschianae, from Formosa. Entomologist London **50** 1917 (127–129). [*Lepidoptera.*] **1417**

Wileman, A. E. and **South,** R. New species of *Lepidoptera* from Japan and Formosa. Entomologist London **50** 1917 (145–148). **1418**

Wileman, A. E. and **South,** R. New species of Pyralidae from Formosa. Entomologist London **50** 1917 (175–178). [*Lepidoptera.*] **1419**

Willard, H. F. *vide* Pemberton and Willard.

Wilkinson, O. J. Reputed unpalatable moths eaten by birds. Lancash. Nat. Darwen **10** 1917 (169). **1420**

Willcocks, F. C. Miscellaneous notes on egyptian insects. Bull. Soc. ent. Egypte **1912** 1914 (136–138 142–143). **1421**

Willcocks, F. C. Some notes on the mealy plum aphid *Hyalopterus pruni,* Fabricius. Bull. Soc. ent. Egypte **9** 1916 (33–37). [*Homoptera.*] **1422**

Willcocks, F. C. Miscellaneous insect notes. Bull. Soc. ent. Egypte **9** 1917 (100–105). **1423**

Wilcox, A. M. Notes on rearing insects for experimental purposes and life-history work. Psyche Boston (7–12) pls. ii and iii. **1424**

Willemse, C. *Orthoptera* neerlandica. 's Gravenhage Tydschr. Ent. **60** 1917 (1–8) 80 fig. **1425**

Williams, C. B. Some problems of sex ratios and parthenogenesis. J. Genetics Cambridge **6** 1917 (255–267). [*Homoptera.*] **1425a**

Williams, C. B. Some notes on butterfly migrations in British Guiana. Tr. ent. Soc. London **1917** 1917 (154–164) map. (*Lepidoptera.*] **1426**

Williams, C. B. Notes on a frog-hopper attacking sugar-cane at Marienburg estate, Surinam. Bull. ent. Res. London **7** 1917 (271–272). [*Homoptera.*] **1427**

Williams, C. B. A new thrips damaging orchids in the West Indies. Bull. ent. Res. London **8** 1917 (59–61) [*Thysanoptera.*] **1428**

Williams, F. X. Notes on the life-history of some north-american Lampyridae. J. N. York ent. Soc. **25** 1917 (11–33). [*Coleoptera.*] **1429**

Williamson, E. B. An annotated list of the Odonata of Indiana. Univ. Michigan Mus. Publ. **2** Ann Arbor **1917** (1–13). [*Paraneuroptera.*] **1430**

Williamson, E. B. The genus *Neoneura.* Tr. Amer. ent. Soc. **43** 1917 (211–246) pls. ix–xix. [*Paraneuroptera.*] **1431**

Williamson, E. B. Some species of *Leptagrion* with descriptions of a new genus and a new species. Ent. News Philadelphia **28** 1917 (241–254) pls. xvii & xviii. [*Paraneuroptera.*] **1432**

Williston, S. W. *Camptopelta,* a new genus of Stratiomyidae. Ann. ent. Soc. Amer. Columbus **10** 1917 (23–26). [*Diptera.*] **1433**

Wilson, H. F. Plant lice attacking orchard and bush fruits in Oregon. Agric. Exp. Sta. Oregon Corvallis Rep. **1911-12** 1913 (81–96) pls. i–iv. [*Homoptera.*] **1434**

Wilson, H. F. The shot hole borer of the northwest; or the pear blight beetle of the east. (*Xyleborus dispar* Fabricus.) Agric. Exp. Sta. Oregon Corvallis Rep. **1911–12** 1913 (97–107) ff. 1–7. [*Coleoptera.*] **1435**

Wilson, H. F. Codling-moth. (*Carpocapsa pomonella* Linn.) Agric. Exp. Sta. Oregon Corvallis Rep. **1911-12** 1913 (108–111) pl. vi. [*Lepidoptera.*] **1436**

Wilson, H. F. The San Jose scale (*Aspidiotus perniciosus* Comm.). Agric. Exp. Sta. Oregon Corvallis Rep. **1911–12** 1913 (112–115) pls. vii viii; ff. 8 9. [*Homoptera.*] **1437**

Wilson, H. F. Tent caterpillars. *Malacosoma* spp. Agric. Exp. Sta. Oregon Corvallis Rep. **1911–12** 1913 (116–117). [*Lepidoptera.*] **1438**

Wilson, H. F. The cherry and pear slug. (*Caliroa cerasi* Linn.). Agric. Exp. Sta. Oregon Corvallis Rep. **1911–12** 1913 (118–121) ff. 10–13. [*Hymenoptera.*] **1439**

Wilson, H. F. and **Lovett,** A. L. Miscellaneous insect pests of orchard and garden. Agric. Exp. Sta. Oregon Corvallis Rep. **1911–12** 1913 (147–165) ff. 19–34. **1440**

Wirtner, M. A new genus of Bothynotinae Miridae. Ent. News Philadelphia **28** 1917 (33–34). [*Heteroptera.*] **1441**

Wodsedalek, J. E. Five years of starvation of larvae. Science New York **46** 1917 (366). [*Coleoptera.*] **1442**

Wolden, B. O. The white admiral or banded purple butterfly in Iowa. Des Moines Proc. Iowa Acad. Sci. **23** 1916 (269). [*Lepidoptera.*] **1442a**

Wright, W. S. Notes and descriptions of Geometridae. J. N. York ent. Soc. **25** 1917 (123–125). [*Lepidoptera.*] **1443**

Yagi, M. *vide* Harukawa and Yagi.

Yamada, S. Nipponsan bunkwa no ni shinshu. [On two new species of Japanese Culicidae.] Dobuts. Z. Tokyo **29** 1917 (61–72). (*Diptera.*] **1444**

Zappe, M. P. Egg-laying habits of *Diprion simile* Hartig. J. econ. Ent. Concord **10** 1917 (188–190). [*Hymenoptera.*] **1445**

Zeck, E. H. *vide* Musgrave & Zeck.

Zeehandelaar, A. *vide* Bernard, Ch.

Zimmermann, A. Der derzeitige Bestand der Gyrinidensammlung des deutschen entomologischen Museums in Berlin-Dahlem und die wissenschaftlichen Ergebnisse ihrer Durcharbeitung. Ent. Mitt. Berlin **6** 1917 (135–170) pl. vi. [*Coleoptera.*] **1446**

Zeleny, C. and Mattoon, E. W. The effect of selection upon the "bar eye" mutant of *Drosophila*. J. Exp. Zool. Philadelphia **19** 1915 (515–529) ff. tables. [*Diptera.*] **1445a**

Zyp, C. van. Over Cantharidine en haar voorkomen in Epicauta ruficeps Ill. [Sur la cantharidine et sa présence dans *Epicauta ruficeps* Ill.] Pharmaceutisch Weekblad Amsterdam **54** 1917 (295–301). [*Coleoptera.*] **1447**

II.—SUBJECT INDEX.

N.B.—*The full reference can be obtained from "Titles" by reference to the author's name and number.*

GENERAL.

Essays.

Shipley, 1231: Shakspere, **Turner, 1327.**

Biographical.

Sahlberg, O. M. Reuter, **1162.**

Gestro, Spinola, **519.**

Bibliographical.

Record for 1915, **Sharp, 1220.**

Bibl. of *Pediculus*, **Nuttall, 984.**

Of Jean Pérez, **Pérez, 1026.**

Ahlander, 13.

Alonso, Spanish, **30.**

Institutions. Collections.

Sagarra, 1161.

Dod, Canadian, **368**; **Bethune, 119.**

Technique. Methods.

Net, **Hagenin, 666.**

Huie, 667: **Krogh,** Injection of tracheal system, **774.**

McColloch, subterranean, **842.**

Pemberton & Willard, Parasite cages, **1025**; Preservation of *Lep.*, **Verity, 1355.**

Photography, **Walden, 1367.**

Walsh, mounting, **1374.**

Rearing insects, **Wilcox, 1424.**

Collecting, **Sagarra, 1160**; **Janse, 708**; **Tullgren, 1321.**

Nomenclature.

Hampson, 602; **Poche, 1078.**

Economic Entomology.

General.

Aders, 11; **Cockerell, 314**; **Essig, 432**; **Felt, 448**; **Fiske, 465**; **Fletcher, 469**; **Fryer, 502**; **Fullaway, 505**; **Gibson, 525**; **Groenewege, 583**; **Hewitt, 638**; **Leefmans, 805a**; **Lovett, 822**; **Marshall,** Abstracts of literature, **875**; **Mayné, 887, 887a**; **Petherbridge, 1039**; **Porter, 1085**; **Swaine, 1275**; **Treherne, 1316**; **Van Deventer, 1346**; **Van Zwaluwenburg, 1352**; **Walton, 1375**; **Wilson & Lovett, 1440**; **Zyp, van,** Cantharidine dans *Epicauta ruficeps*, **1447.**

Reports.

Ireland 1914 and 1915, **Carpenter, 242.**

Rennes, **Gaitel, 592.**

India, **Fletcher, 466 & 468.**

Connecticut, **Britton, 200.**

Canada, **Hewitt, 639, 640.**

Creatures attacking.

(*a*) *Coleoptera.*

Bussy, 224; **Chittenden & Howard, 267**; **Doop, 375**; **Emmerez, 419**; **Ford, 478**; **Munro,** ; **Northrup, 983**; **Petherbridge, 1038**; **Razzauti, 1107**; **Rockwood, 1130a**; **Silvestri, 1235**; **Treherne, 1317.**

(*b*) *Hymenoptera.*

Bordas, 150; **Bridwell, 194a**; **Frohawk,** *Vespa*, wheat, **499**; **Giffard, 531a**; **Phillips, 1049**; **Sarra, 1170.**

(*c*) *Lepidoptera.*

Ainslie, 16; **Andres, 36**; **Clutterbuck, 286**; **Gill, 537**; **Gough, 569**; **Huie, 668**; **Imms,** *Chareas graminis*, **690**; **Isely, 696, 697**; **McGregor, 850a**; **Quaintance & Geyer, 1098**; **Sarra, 1169**; **Willcocks, 1423**; **Wilson, 1438.**

(*d*) *Diptera.*

Back & Pemberton, 55, 56; Güssow, 591; Jackson & Lefroy, 702; Macfie, 846; Petherbridge, 1037; Rennie, 1114; Silvestri, 1233.

(*e*) *Hemiptera.*

Bernard etc., 117; Canter Visscher, 237a; Hyslop, 683a; Leefmans, 805; Misra, 915; Steven, 1262; Thomas, 1297; Willcocks, 1422; Williams, 1427.

(*f*) *Aphidae.*

Del Guercio, 351; Wilson, 1434.

(*g*) *Coccidae.*

Brain & Kelly, 171; Fletcher, 467; Maulik, 882; Seabra, 1213.

(*h*) *Orthoptera.*

Jones, 737; Barber & Jones, 83a; Stebbing, 1261.

Insects and *diseases of man.*

Barber, 83; Christy, 279; Cornwall & Menon, 324; Esben-Petersen, 427; Garin, 510; Haseman, 618; Headlee & Beckwith, 623; Honeij & Parker, 655; Howard, 661; Jennings, 715; MacGregor, 851; Maxwell-Lefroy, 885; Nuttall, 985; Otten, 1007; Riley, 1123; Roubaud, 1153, 1157; Schüffner, 1203, 1205; Sergent & Sergent, 1215; Sinton, 1241; Swellengrebel, 1278a; Townsend, 1315b; Walker & Barber, 1371.

Attacks on animals.

Bergman, 111; Dove, 377; Froggatt & Froggatt, 498; Jack, 700; Mitzmain, 918; Mote, 937; Roubaud, 1156.

Silk.

Aoki & Honda, 39, 40; Ishizuka, 698; Kawase, 740.

STRUCTURE.

General.

Back & Pemberton, *Diptera*, 55, 56.

Larva of *Hyperaspis*, Föving, 133.

Coutant, *Protocalliphora* larva, 325a.

Keuchenius, *Diptera*, 752.

Of *Dipt.* larvae, Keilin, 742.

Lichtenstein & Picard, 815.

Nielsen, entoparasitic larvae, 976.

Silvestri, *Oscinosoma* larva, 1234.

Of Outer Parts.

Bergman, 111; Crampton, 326a.

Trophi *Nacerdes*, Bugnion, 327.

Busck, 223.

Abdomen, Chopard, 269.

Scales, Cockayne, 287.

Crampton, 327, 328: head, 329, 330.

Outer struct. of larvae, Heinrich, 631.

Mouth, *Dipt.* larvae, Keilin, 744.

Ljungdahl, 819.

Wings, Needham, 968.

Pantel, 1012; Pantel, abdomen, 1013.

Schierbeek, 1179, 1180, 1181.

Shelford, 1224.

Wings, Tillyard, 1301.

Waterston, *Chalcididae*, 1382.

Nervous System and Sense Organs.

Baker, 71; Les yeux des insectes nocturnes, Bugnion, 215b, 215c; Buxton, 227; Hansen, 608; Hess, 636; Hilton, 643; Holmgren, 653; McIndoo, 853; Navas, 960; Roberts, 1128.

Myology.

Craighead, 326.

Alimentary Canal.

Bordas, 147; Bordas, 148, 151; Foa, 473; Nelson, 970,

Respiratory System.

Munro, 949; Rich, 1122; Tillyard, 1303.

Blood.

Glaser, 561.

Glands.

Bordas, 145; Kephart, 751.

Reproductive Organs.

♀ Genitalia *Lep.*, Chapman, 256.

♂ genitalia *Paraneuroptera* Kennedy, 747, 749.

Pediculus, Nuttall, 987.

Genitalia *Trypeta*, Sasaki, 1171.

Eggs of Aphidae, Peterson, 1036.

PHYSIOLOGY.

Cytology *vide* Development.

General. Miscellaneous.

Longevity and its relation to reproduction, **Rau & Rau, 1105.**

Temperature, **Kitajima & Tanita, 757.**

Cycles of generations.

Steven, 1262.

Sex.

Secondary sexual characters and gonads, **Cockayne, 289.**

Determination of sex, **Jack, 699; Ikeda & Inouye, 686; Morgan, 928a; Patterson, 1021; Patterson & Porter, 1022.**

Hermaphroditism.

Cockayne, 288, 290; Harrison, 613a; Ant, Donisthorpe p. lxxviiii Pr. ent. Soc. Lond. **1916.**

Functions, various.

Circulation.

Brocher, 201.

Respiration.

Kawase & Katsuhari, 741; Macfie, 846; Teodoro, 1291.

Respiration of eggs (Japanese). **Suzuki, 1273.**

Metabolism. Excretions.

Nutrition, **Guyénot, 594.**

Colour.

Bemmelen, 101; Shelford, 1225.

Environmental.

Atkin & Bacot, 48; Cameron, 232; Headlee, 622.

Howlett, 665; Lister, 818.

Chemical.

Cavazza, 243; Glaser, 562.

DEVELOPMENT.

General.

Atkin & Bacot, 48.

Wings and starvation, **Gregory, 580.**

Regeneration.

Chapman, 261; Illingworth, 687.

Chromosomes, Cytology.

Carothers, 239; Hance, 607; Holt, 654; Gatenby, Germ cells, **513; McClung, 840;** Chromosome, **Metz, 894; Nakahara, 955; Rayburn, 1106; Robertson, 1129; Wenrick, 1398; Whiting, 1410.**

Spermatogenesis.

Gatenby, 514; Machida, 852; Patterson & Porter, 1022; Plough, 1077; Porter, 1086; Shaffer, 1216.

Fertilisation.

Patterson, 1023; Taylor, 1290.

Parthenogenesis.

Enslin, 424; Ewing, 440; Feytaud, 460; Goldschmidt, 563; Jack, 699; Lécaillon, 799, 800, 803; Patterson & Porter, 1022; Williams, 1425a.

Embryology.

Gatenby, 512; Hagan, 595; Hegner, 629; Strindberg, 1271.

Postembryology. Metamorphosis.

Bergman, 111; Bordage, 143, 144; Bugnion, 216; Chapman, 260; De Gryse, 350; Ejikoff, 412; Metamorphosis and humidity, **Elwyn, 415a;** of luminous organs, **Hess, 637; Macfie, 847;** Anomalies of, **Keilen, 743; Meves, 899, 900; Tillyard, 1303.**

Larvae.

Of *Coleoptera*, **Saalas, 1159.**

ETHOLOGY.

General and Miscellaneous.

Beeson, wax-tubes, **100; Bordas, 149; Bouvier,** wars, **169; Chapman, 259; Hamilton, 600;** Bagworms, **Hardenberg, 611; Hewitt, 638; Lichtenstein & Picard, 815; Kennedy, 746; Tillyard, 1300.**

Ant-life.

Bruck, 205, 207, 209; Crawley 333; Donisthorpe, 373; Emery, 418; Goot, 565; Hebard, 628; Ihering, 685; Mully, 867; Powell, 1089; Schmitz, 1184; Stäger, 1258; Wheeler, 1400, 1403, 1404, 1405.

Bee-life.

Frison, 491; Gough, 568; Middleton, 911; Nielsen, 977.

Wasp-life.

Froggatt, 495; Parker, 1014; Rabaud, 1101, 1102; Roubaud, 1154.

Termite-life.

Silvestri, 1239; Thompson, 1298.

Cavernicolous, subterranean.

Bolivar, 135; Chopard, 271; Dodero, 370; Fagniez, 442; Jeannel, 711, 713; Minozzi, 914; Reitter, 1113b.

Aquatic.

Netspinning, Ahn, 29.

Gregariousness.

Balfour, 77; Blair & Poulton, Colour association, 128; Cameron, 231.

Migration.

Bernheim, 118; Shannon, 1217; Williams, 1426.

Demoll, flight, 353.

Sound-production.

Allard, 21.

Food-habits.

Bordas, 146; Coutant, 325a; Hungerford, 669, 671; Lichtenstein, 814; Peyerimhoff, 1043, 1046; Pool, 1080; Ripley, 1125; Smit, 1248; Snyder, 1256; Warren, 1378; Woodsedalek, starvation, 1442.

Parasitic.

Amari, 31, 32; Bacot, 57, 58; Chidester, 266a; Ferris, 458; Brues, 212; Grimshaw, 581; Malenotti, 857; Munro, 948a; Nielsen, 976; Nuttall, 984, 985, 986; Rabaud, 1099, 1100, 1103; Roman, 1142; Rothschild, 1145; Roubaud, Haemophagic parasites, 1155; Townsend, 1315.

Nests. Habitat.

Marchand *Chionea*, 870; Nordström, 981; Roman, 1142; Smith, 1252a; Stöhr, 1265.

Sex-relations.

Colthrup, Butterfly copula, p. 16 Ent. Rec. 29.

Nuttall, 987; Okazaki, 997; Shinji, 1227.

Oviposition, Parental.

Adair, 6, 7, 8, 9, 10; Bergman, 111; Bordas, 152; Bruch, 208; Hungerford, 673; Jensen-Haarup, 717, 719; Knab, Intermediate, 769; Mayné, 887; Roubaud, 1153; Schuhmacher, 1206; Smith, 1251; Welch, 1397; Zappe, 1445.

Hibernation.

Baumberger, 93; Kisliuk, 756; Pictet, 1071.

Phenology.

Verity, 1354; Walker, 1369.

Instinct. Psychology.

McIndoo, Recognition, 854.

Hansen, 608; McDermott, 843; Oberthür, 996.

Patten, 1020, 1020a.

Réactions thermotropiques chez les insectes; Pictet, 1070a.

Resemblance, Protection, Utility.

Abbott, 2; Abraham, 3; Clainpanain, 279; Curtis, 341a; Herrera, 634; Holmberg, 652; Jermyn, Pr. ent. Soc. Lond. 1917 pp. ix–xiii; Kephart, 751; Lloyd, 820; Longley, 821; Le Cerf, 804; Oberthür, 992; Poulton, 1088; Schouteden, 1190; Standen & Coward, 1259; Wilkinson, 1420; Spiders and *Lep.*, Poulton, Proc. ent. Soc. London 1916 p. lxxiv–lxxvi; Talbot Pr. ent. Soc. Lond. 1917 p. xxviii.; Talbot Proc. ent. Soc. London 1916 p. lxxxiii; and Chapman, 257; Duporte, Death-feigning, 385.

Luminosity.

Williams, 1429.

Natural history (special cases).

Clemens, 283; Froggatt, lead-boring, 496; Hill, of *Lyperosia*, 642; Hungerford, 674; Main, *Geotrupes*, 855; Roth, 1144.

Pupal Habits. Cocoons.

Ainslie, 15; Bergman, 111; Hawkes, Colour, **619, 620; Lyle,** colour, **835;** Jumping cocoons, **Meyrick** p. 62 Ent. Mo. Mag. **53.**

Double cocoon race of silkworms, **Sasaki, 1173.**

Insects, Plants and Flowers.

Dyer & Knab, 407; Froggatt, 494; Green, 579; Pierce, Insect-catching plants, **1073; Hoffmeyer, 647; Saalas,** *Picea excelsa,* **1159; Trcherne, 1316.**

Galls.

Bagnall, 61, 65; Bagnall & Harrison, 66; Bagnall & Wallace, 67; Baker, 72; Beutenmuller, 120; Brèthes, 174, 187, 188, 189; Burke, 218; Burkill, 219; Felt, 449, 451; Houard, 659; Jörgensen, 723; Lambertie, 786.

VARIATION. AETIOLOGY.

General.

Nabours, 952a; Bellamy, 100a.

Variation.

Abbott, 1, 2; d'Auriol, 49; Barker, 84, 85, 86; Ferrante, 457; Joicey & Kaye, 729; Lécaillon, 801, 802, 803; Mac Dowell, 845; Malenotti, 858; May, 886; Metz & Bridges, 895; Painter, 1010; Pantel, 1012; Reverdin, 1116, 1117; Roth, parthenogenetic, **1144; Schott,** *Collembola,* **1187; Shelford, 1225; Wanach, 1377; Warren, 1379.**

In nervuration, *Ammophila,* **Poulton,** p. xiii Pr. ent. Soc. Lond. **1917.**—Asymmetrical var. of *A. corydon,* **Frohawk** p. 229 Entomol. **50.**

Teratology.

Chapman, 260; 261; Christeller, 274; Keilin, 743; Pool, 1080; Tremoleras, 1318; Viehmeyer, 1356; Watanabe, 1381.

Janson, *Coleoptera,* Proc. ent. Soc. London **1916** p. lxxi.—of *Trixa,* **Villeneuve** p. 229 Bull. Soc. ent. France **1917.**—*Prasocuris junci* **Walsh** p. 41 Ent. Mo. Mag. **53.**

Hybrids.

Antheraea yamamai and *A. peryni* hybrids (Japanese), **Kitajima, 758; Harrison, 613a.**

Genetics. Heredity.

Vide etiam Cytology in Development.

Bridges, 191a; Foot & Strobell, 475; Guyénot, 594; Hindle, 644; Hyde, 678, 679, 680; MacDowell, 845a; Metz & Bridges, 895; Morgan, 926, 927, 928; Muller, 947, 948; Palmer, 1011; Plough, 1076; Stark, 1260a; Sturtevant, 1272; Tower, 1309; Zeleny & Mattoon, 1445a.

Hered. of small variations, **Perkins,** p. lxxxix Pr. ent. Soc. Lond. **1916.**

Accidental bivoltine silkworms, **Lécaillon, 801, 802.**

Evolution, Phylogeny.

Crampton, 327, 328; Morgan, 925; Rothschild, 1145; Schierbeek, 1179; Tillyard, 1303.

GEOGRAPHY or FAUNISTIC.

General.

Distribution, **Walsh, 1373.**

Insect drift, **Needham, 967.**

Distribution of Bistoninae **Harrison 613.**

Cecidomyid distribution, **Felt, 447.**

Arctic and Antarctic.

Enderlein, 421.

Insular.

Canaries. *Lepidoptera,* **Hampson, 604; Prout, 1096a.**

Madeira. *Lepidoptera,* **Prout, 1096a.**

Ascension. *Dermaptera,* **Hebard, 625.**

New Zealand. *Coleoptera,* **Broun, 202.**—*Lepidoptera,* **Howes, 664; Meyrick, 905, 906; Philpott, 1050.**—*Diptera.* **Miller, 913.**—*Homoptera.* **Muir, 944.**

Kermadec islds. *Aphaniptera* **Hilgendorf** p. 428 Tr. N.Z. Inst. **49.**

New Caledonia, *Coleoptera,* **Grouvelle, 589.**

Lord Howe isld., *Coleoptera*, **Lea, 797.**—*Lepidoptera*, **Turner, 1324.**

Louisiade Arch. *Coleoptera*, **Janson, 710.**—*Lepidoptera*, **Hampson, 606.**

Trobriand islds., **Swinhoe, 1282, 1283.**

D'Entrecasteaux islds., *Lepidoptera*, **Hampson, 604.**

Bismarck Arch., *Lepidoptera*, **Hampson, 604.**

New Britain, *Lepidoptera*, **Swinhoe, 1282.**

Duke York isld., *Orthoptera*, **Giglio-Tos, 532.**

Solomon islands, *Hymenoptera*, **Morley, 932.**—*Lepidoptera*, **Hampson, 604, 605, 606; Swinhoe, 1281, 1282.**

Fiji, *Hymenoptera*, **Turner, 1328;** *Diptera*, **Ricardo, 1120.**—*Homoptera*, **Muir, 944.**

Samoa, *Lepidoptera*, **Hampson, 604.**

Caroline islands, *Isoptera*, **Oshima, 1003.**

Falkland islands, *Coleoptera*, **Cameron, 233.**—*Diptera*, **Lamb, 783.**

Hawaiia, *Coleoptera*, **Perkins, 1031.**—*Hymenoptera*, **Bridwell, 194; Girault, 545; Rohwer, 1133.**—*Diptera*, **Illingworth, 688.**—*Homoptera*, **Giffard, 531; Muir, 943.**

Galapagos, *Diptera*, **Townsend, 1310, 1311, 1313.**

Palaearctic Region.

(a) Collectively.

Coleoptera.

Fleischer, 465a; Pic, 1056; Reitter, 1113b, 1113c, 1113e.

Hymenoptera.

Pic, 1059.

Lepidoptera.

Turati, 1322; Prout, 1096a.

Diptera.

Riedel, 1122a.

Homoptera.

Melichar, 887c.

(b) Europe, collectively.

Hymenoptera.

Bondroit, 142; Kieffer, 753.

Lepidoptera.

Chapman, 265; Islands, **Demaison, 352.**

Diptera.

Villeneuve, 1358, 1360, 1362.

Aphidae.

Del Guercio, 351.

(c) North Europe and Siberia.

Coleoptera.

Ahlberg, Sweden **14; Ericson,** Sweden, **425; Frisendahl,** Sweden, **490; Mjöberg,** Faeroes, **919; Saalas,** Finland, **1159; Scholz,** Lapland, **1189.**

Hymenoptera.

Roman, Sweden, **1141; Roman,** Faeroes, **1143.**

Lepidoptera.

Benander, Sweden, **102; Brundin,** Sweden, **214; Hamfeldt** Faeroes, **599; Peyron,** Sweden, **1048; von Porat,** Sweden, **1364; Welander,** Sweden, **1395.**

Trichoptera.

Klefbeck, Sweden, **760.**

Diptera.

Ammitzböll Sweden, **33; Poppius, Lundström** and **Frey, 1081; Ringdahl,** Sweden, **1124.**

Thysanoptera.

Tullgren, Sweden, **1320.**

Ephemeroptera.

Bengtsson, Sweden, **105.**

Paraneuroptera.

Welander, Sweden, **1395.**

(d) British Islands.

THE FAUNA AS A WHOLE.

Insecta.

Popular, **Bastin, 92.**

†**Bolton, 138, 139.**

Burkill, 219.

†**Cockerell, 312.**

Britten, 198, 199; Donisthorpe, 372; Edwards, 411; Pool, 1079; Sharp, 1218, 1219.

Atomaria versicolor withdrawn, **Newbery** p. 127 Ent. Mag. **53.**

Zygogramma exclamationis, **Cocks** p. 85 Ent. Mo. Mag. **53.**

Hymenoptera.

Bagnall, 62, 63, 64; Johnson, 728; Lyle, 834; Morley, 933; Perkins, 1027, 1028.

Oxybelus, **Morice, 929.**

Polistes gallicus, **Morice** p. lxvi Proc. ent. Soc. Lond. **1916.**

Andrena vaga, **Perkins** p. 236 Ent. Mo. Mag. **53.**

Kirby's Coll., **Perkins, 1029.**—Smith's collection, **Perkins, 1030.**

Lepidoptera.

Burrows, 221; Metcalfe, 893; Pierce, 1072.

Ocneria dispar, **Adkin, 12.**

Foreign *Pap.,* **Green,** p. 278 Ent. Mo. Mag. **53.**

Ocystola acroxantha, **Meyrick** p. 265 Ent. **50.**

Sphinx convolvuli in Scotland, Scott. Nat. **1917** pp. 289–292.

Noctuidae arrangement, **South, 1257.**

Neuroptera.

Lucas, 827.

Diptera.

Bagnall, 65; Bagnall & Harrison, 66; Collin, 321; Grimshaw, 582; Harrison, 616; Stewart, 1264.

Danish and british faunae, **Collin** pp. 65–67 Ent. Mag. **53.**

Hemiptera.

Butler, 226; Green, *Coccidae,* **577, 578,** and Novelties p. xxiv Pr. ent. Soc. Lond. **1917; Harrison,** *Aleurodidae,* **612; Harrison,** *Homoptera,* **615.**

Theobald, *Aphidae,* **1294.**

Psylla aeruginosa **Britten** p. 166 Ent. Mag. **53.**

Ellipoptera.

Grimshaw, 581.

Paraneuroptera.

Lucas, 829.

Orthoptera.

Lucas, 828.

Aptera.

Bagnall Lancash. Nat. **10** pp. 80, 84.

Bagnall, *Protura,* **60.**

Shoebotham, *Collembola,* **1232.**

LOCAL LISTS.

Insecta, collectively.

Devon: **Perkins, 1032; Champion** p. 14 Ent. Mo. Mag. **53** and p. 277 t.c.

New forest, **Walker, 1372.**

Stroud, **Nicholson** Ent. Mo. Mag. **53** pp. 116–122.

Glamorgan, **Hallett, 598.**

Wallasey & Porthcawl, **Hallett** pp. 307–310 Lancash. Nat. **10.**

Lancashire & Cheshire, Lancashire Nat. **9** & **10** various notes.

Yorkshire, many notes in Naturalist **1917.**

Coleoptera.

Devon, **Mitchell** Ent. Mo. Mag. **53** p. 40.

Dorset, **Haines** pp. 162–164 Ent. Mo. Mag. **53.**—Dorset, *Lytta,* **Haines** p. 235 Entomol. **50.**

Glamorgan *Claviger longicornis,* **Hallett** p. 15 Ent. Mag. **53.**

Gloucestershire, **Davis** p. 129 Ent. Mag. **53.**

Somerset *Dytiscus dimidiatus,* **Blair** p. 85 Ent. Mo. Mag. **53.**

Chichester *Lytta,* **Anderson** p. 188 Entomol. **50.**

Strood *Trogoderma khapra,* **Walker** p. 165 Ent. Mag. **53.**

Berks *Anch. sexpunctatus* & *Nan. gracilis,* **Tomlin** p. 2 4 Ent. Mo. Mag. **53.**

Lower Thames, **Thompson** p. 15 Ent. Mo. Mag. **53.**

London district, **Box** pp. 109–111 Ent. Mo. Mag. **53.**

Epping *Meg. inclinans*, **Nicholson** p. 106 Essex Nat. **18.**

Waltham Abbey *El. coccinatus*, **Bedwell** p. lxxx Pr. ent. Soc. London **1916.**

Wood Walton water-beetles, **Donisthorpe** Ent. Rec. **29** pp. 52–53.

Norfolk *Tapinotus*, **Janson** p. 233 Ent. Mo. Mag. **53.**

Thetford *Lytta*, **Thouless** p. 15 Ent. Mo. Mag. **53.**

Surrey **Newill** Ent. Mo. Mag. **53** p. 165.

Guildford, *Cis bilamellatus*, **Champion** p. 164 Ent. Mag. **53.**

Woking, **Champion** p. 127 Ent. Mag. **53** and p. 173 t.c.

Lancashire, *Longicornia*, **Hardy** & **Standen** Lancash. Nat. **10** p. 226–230.

Lancashire and Cheshire, **Dutton** pp. 6–8 Lancash. Nat. 10.—**Dunlop** pp. 273–276 Lancash. Nat. **9.**

Southport, *Arena*, **Wilding** p. 235 Ent. Mo. Mag. **53.**

Cumberland, *Ceut. alliariae*, **Murray** p. 165 Ent. Mo. Mag. **53.**

Berwick, *Monohammus*, *Acanthocinus*, **Bolam** p. 110 Scott. Natural. **1917.**

Scotland **Evans** (continuation) Scott. Natural. **1917** p. 19–24.

Peebleshire **Black** p. 277 Ent. Mo. Mag. **43.**

East Lothian *Salpingus ater*, **Black** p. 182 Ent. Mo. Mag. **53.**

Renfrew, *Atomaria procerula*, **Fergusson** p. 71 Scott. Natural **1917.**

Hamilton, *Triphyllus punctatus*, **King** p. 296 Scott. Nat. **1917.**

Meath and Cavan, **Nicholson** Irish. Nat. **2** pp. 28–31.

Hymenoptera.

Dorset *Tenthredinidae*, **Haines** pp. 63–65 Ent. Mo. Mag. **53.**

London district *Tenthredinidae*, **Box** p. 63 Ent. Mo. Mag. **53.**

Essex, Ants, **Box** p. 17 Ent. Mo. Mag. **53.**

Staffordshire, *Ichneumonidae*, **Morley** Ent. Mo. Mag. **53** pp. 39 and 40.

Roxburgh, *Rhyssa*, **Evans** p. 212 Ent. Mo. Mag. **53.**

East Lothian **Evans** p. 230 Scott. Nat. **1917.**

Renfrew *Sirex*, **Stewart** p. 257 Ent. **50.**

Ireland Ichneumonidae, **Johnson** Irish. Nat. **27** pp. 37–40.

Wexford *Psithyrus*, **Moffat** Irish Nat. **27** p. 154.

Lepidoptera.

Guernsey **Lowe** p. 253–255 Ent. Rec. **29.**

Paignton, **Milman** p. 44 Entomol. **50**

Dorset *Hypena obsitalis*, **Haines** p. 256 Ent. **50.**

New Forest, **Whittle** pp. 14–15 Entomol. **50.**—**Burras** p. 239 Entomol. **50.**

Gloucestershire, **Davis** p. 60 Ent. Rec. **29.**

Gloucester and Suffolk, **Metcalf** Ent. **50** p. 273–277.

Bath, **Sich** pp. 166–169 pp. 185–187, 234–235 Ent. Rec. **29.**

Netley, **Robertson** Ent. Rec. 29 p. 232–234.

Eastbourne, *Stauropus*, **Bobby** p. 191 Entomol. **50.**

Brighton *P. machaon*, **Dewey** p. 209 Entomol. **50.**

Bognor, *Apatura*, **Lloyd** p. 208 Entomol. **50.**

Canterbury, **Whittle** p. 18 Entomol. **50.**

Godalming, *Stauropus*, **Wales** p. 237 Entomol. **50.**

Hindhead, **Sheldon** p. 42 Entomol. **50.**

Middlesex, **Rowland-Brown** p. 141 Entomol. **50.**

Lewisham, **Adkin** p. 141 Entomol. **50.**

Wanstead **Thurnall** p. 190 Entomol. **50.**

Essex *Euvanessa*, **Frohawk** p. 283 Ent. **50.**

Bucks *Rhopalocera*, **Oliver** p. 286 Ent. **50.**

Hertfordshire, **Gibbs, 524.**

Hertfordshire, **Foster, 480.**

Woodbridge *S. pinastri,* **Waller** p. 258 Ent. **50.**

Cambridge, **Jones** p. 16 and p. 208 Entomol. **50.**

Rugby M. **Bateson** Rep. Rugby School. Soc. **1916** pp. 93–97.

Marlborough, **Stowell** Entomol. **59** p. 253–255; **Holt** Rep. Marlborough Coll. Soc. **65** pp. 31–36.

N. Yorksh., **Lofthouse** pp. 104–106 Ent. Rec. **29.**

Yorks and Lancs., *Euvanessa,* **Rowland-Brown** p. 283 Ent. **50.**

Lancashire *V. antiopa,* **Midgley** Lancash. Nat. **10** p. 101.

Lancashire and Cumberland, **Gurney** pp. 7–9 Entomol. **50.**

Scotland, *Euvanessa,* **R.-B.** p. 258 Ent. **50.**

Wigtownshire, **Gordon 567**; **Maxwell** p. 278 Scott. Nat. **1917.**

Forth *Venusia,* **Evans** p. 230 Scott. Nat. 1917.

Orkney, *S. carpini,* **Schunck** p. 164 Entomol. **50.**

Ireland, *Agriades, bellargus,* etc., **Wilson** p. 237 Entomol. **50.**

Clare, **Langham** Irish. Nat. **27** pp. 114–117.

Tyrone *Hadena protea,* **Greer** Irish Nat. **27** p. 121.

Cork *Anosia archippus,* Irish Nat. **27** p. 18.

Kerry *Notodonta bicoloria,* **Bonaparte-Wyse** Irish Nat. **27** p. 164.

Trichoptera.

Cumberland *L. elegans,* **Porritt** p. 279 Ent. Mo. Mag. **53.**

Neuroptera.

Essex *Raphidia,* **Box** p. 18 Ent. Mo. Mag. **53.**

Kincardine, *Megalomus hirtus,* **King** p. 87 Ent. Mo. Mag. **53.**

Diptera.

Devon, **Bracken 170.**

Dorset, **Haines** pp. 102-105 Entomologist **50.**

Wareham, **Pearce** p. 257 Ent. **50.**

Dunster, **Audcent** p. 41 Ent. Mo. Mag. **53.**

Marlborough, **Kirkpatrick** Rep. Marlborough Coll. Soc. **65** pp. 31–37 pl.

Norfolk and Suffolk, **Morley & Atmore 934.**

Forth *Tip vittata,* **Evans** p. 68 Scott. Nat. **1917.**

Forfar, **Carter** p. 96 Scott. Natural **1917.**

Bute, **Grimshaw** p. 278 Scott. Nat. **1917.**

Blairgowrie *Limnobia bifasciata,* **Carter** p. 18 Scott. Nat. **1917.**

Lewis, Hebrides, **Lamb** p. 71 Scott. Natural. **1917.**

Hemiptera.

Oxford *Metatropis, Ploiariola, Berytus,* **Britten** pp. 182 and 183 Ent. Mo. Mag. **53.**

Glamorgan, **Hallett, 597.**

Cumberland, **Murray** p. 112 Ent. Mo. Mag. **53.**

Rannoch *Aradus corticalis,* **King** p. 296 Scott. Nat. **1917.**

Paraneuroptera.

Hants, *Somatochlora,* **Distant** p. 191 Entomol. **50.**

Cumberland, **Day** p. 183 Ent. Mo. Mag. **53.**

Aptera.

Lancashire and Cheshire, *Aptera Collembola,* **Shoebotham** Lancash. Nat. **10** pp. 219–223.

Scotland *Campodea fragilis,* **Evans** p. 234 Scott. Nat. **1917.**

(e) Central and Eastern Europe.

Insecta, collectively.

Ulmer and others, Baltic, **1344.**

†**Meunier** (Germany) **898.**

Coleoptera.

Denmark *Coleoptera,* **Hansen 609 West, 1399**; **West** Ent. Meddel. **11** pp. 16–19 and pp. 360–362.

Holland, **Everts 433-438.**

Wagner (Germany) **1365.**

Hymenoptera.

†**Meunier** (Holland) **896.**

Smits van Burgst (Holland) **1253.**

Lepidoptera.

Denmark, **Hoffmeyer 647**; **Larsen 794**; **Klocker, 766.**

Auriol, Jura, **49, 50.**

Switzerland: **Mongenet 921**; **Wehrli 1390.**

Trichoptera.

Findal, Denmark, p. 359 Ent. Meddel. **11.**

Diptera.

Jørgensen, Denmark, **721.**

Schmitz, Holland **1185** and **1186.**

Hemiptera.

Denmark, **Anon.** pp. 363, 364 Ent. Meddel. **11**; **Jacobsen 703**; **Jensen-Haarup 716** and **718.**

Paraneuroptera.

Mierzejewski, Livland, **912.**

Orthoptera.

Willemse, Holland **1425.**

(f) France.

Insecta, collectively.

†**Bolton 140**; **Howard 659**; **Lambertie, 786**; **Picard 1069.**

Coleoptera.

Auzat, 52, 53; **Bedel, 98**; **Chobaut, 268**; **Fagniez, 441, 442**; **Gavoy, 515**; **Hustache, 675**; **Jeannel, 711, 713**; **Peyerimhoff, 1041, 1047**; **Picard** & **Lichtenstein, 1070.**

Hymenoptera.

Bondroit, 141.

Gaulle, *Troctocerus* and *Eucremastus,* p. 74 Bull. Soc. ent. France **1917.**

Lepidoptera.

Gouin, 570; **McClymont;, 841**; **Smart,** pp. 11-14 etc. Entomol. **50.**

Brown, Champagne, p. 189 Entomol. **50.**

Trichoptera.

Lacroix, 781.

Diptera.

Pierre, 1074; **Villeneuve, 1361** & p. 218 Bull. Soc. ent. France **1917.**

Orthoptera.

Chopard, 272.

(g) South Europe and Mediterranean Basin.

Insecta, collectively.

Spain: **Bohigas** & **Sanchez, 134**; **Fuente, 503**; **Navas, 959.**

Minozzi, Italy, **914.**

Lesbos, *Lep.* & *Neur.,* **Joannis** p. 247 Bull. Soc. ent. France **1916.**

Egypt, **Willcocks, 1421**; Tourah, **Boehm** pp. 46–48 Bull. Soc. ent. Egypte **7**; **Innes,** *Col.* & *Hem.* aquatic, Bull. Soc. ent. Egypt **9** p. 93 & 94; Cairo, **Sowerby** pp. 9–11 etc. Entomol. **50.**

Coleoptera.

Sahlberg's list, **Andres** pp. 84–132 Bull. Soc. ent. Egypte **6.**

Spain, **Bolivar, 135, 136, 137**; **Escalera, 430**; **Jeannel, 711.**

Italy, **Benick, 106**; **Dodero, 370**; **Grouvelle, 587.**

Mallorca, **Reitter, 1113a.**

Sardinia, **Reitter, 1113d.**

Balkans, **Müller, 939.**

Egypt, **Alfieri, 20**; **Andres, 37**; **Clainpanain, 280**; **Ferrante, 456**; **Innes, Bey, 694, 695**; **Pic, 1053, 1054**; **Reitter, 1113**; **Thery, 1295**; **Andres,** *Pimelia,* Bull Soc. ent. Egypte **6** pp. 50–55; **Ferrante** Bull. Soc. ent. Egypte **1912** p. 145 1 **Iconomopoulos,** Bull. Soc. ent. Egypte **9** pp. 109–113.

North Africa, **Bedel, 99**; **Laboissière, 778**; **Lesne, 809**; **Normand, 982**; **Peyerimhoff, 1040, 1042, 1044, 1045**; **Théry, 1296.**

Hymenoptera.

Emery, 417; **Pic, 1060.**

Malenotti, Spain, **859**; **Mercet,** Spain, **888, 889, 890.**

Malenotti, Sicily, **862.**

Italy, **Malenotti, 861; Masi, 878; Silvestri, 1235, 1236, 1237.**

Tunis, **Smits van Burgst, 1254a.**

Egypt, **André, 34; Debski, 349; Du Buysson, 228; Dudgeon & Gough, 382; Storey, 1267.**

Lepidoptera.

Italy, **Turati, 1323; Verity, 1353.**

Studd, Salonica, Pr. ent. soc. Lond. **1917** pp. ii & iii.

North Africa, **Chrétien, 273; Faroult, 446; Lucas, 826; Nissen, 980; Oberthür, 989; Rothschild, 1149.**

Egypt, **Andres, 35; Graves, 575; Storey** Bull. soc. ent. Egypte **7** p. 70.

Asia Minor, **Meyrick, 903; Reverdin, 1115.**

Trichoptera.

Navás, Egypt, **958.**

Neuroptera.

Navás, Egypt, **958.**

Diptera.

Silvestri, Italy, **1234.**

Bezzi, N. Africa, **121.**

Hemiptera.

Leonardi, Italy, *Coccidae,* **807; Malenotti,** Italy, *Coccidae,* **860.**

Bergevin, Algeria, *Homoptera,* **107, 108, 109.**

Newstead, Algeria, *Coccidae,* **972.**

Distant, Egypt, *Homoptera,* **365.**

Horvath, Egypt, *Homoptera,* **658.**

Montandon, Egypt, *Heteroptera,* **922.**

Plecoptera.

Navás, Spain, *Plecoptera,* **962.**

Ephemeroptera.

Navás, Spain, **963.**

Orthoptera.

Borelli, Italy, **157.**

Burr, Salonika, pp. 45–49 Ent. Rec. **1917.**

Giglio-Tos, Egypt, **532; Innes Bey 693.**

Giglio-Tos, Syria, **532.**

(h) Caucasus, West & Central Asia.

Coleoptera.

Chatanay, Aden, **266.**

Hymenoptera.

Cockerell, Persia, **303.**

Lepidoptera.

Reverdin, 1114a.

Diptera.

Gedoelst, Centr. Asia, **516.**

Africa.

Insecta, collectively.

Arrow etc. **47; Carpenter, 240: Silvestri, 1239.**

Coleoptera.

Achard, 4; Alluaud, 22, 23, 24, 28; Arrow, 43, 45; Bedel, 97; Blair & Poulton, 128; Bourgoin, 163; Champion, 249, 253; Chatanay, 266; Clavareau, 281; Desbordes, 355, 356, 357; Gestro, 520; Grouvelle, 586, 588, 590; Heller, 632; Laboissière, 779; Peschet, 1033, 1035; Pic, 1055, 1057, 1063, 1066 Schouteden, 1198; Sharp, 1218.

Hymenoptera.

Arnold, 41; Berlese, 115; Brauns, 173; Cockerell, 291, 298, 304, 310, 311; Grandi, 572; Mantero, 868, 869; Morley, 932; Santochi, 1168; Schouteden, 1199; Strand, 1268; Turner, 1328–1337, 1339; Turner & Waterston, 1341; Viereck, 1356a; Waterston, 1384, 1385, 1387.

Lepidoptera.

Blachier, 127a; Breyer, 190, 191; Closs, 285; Hampson, 603-606; Hobley Mombasa *Urania croesus* p. 185 J. E. Africa Soc. **6; Holland, 648; Janse 704, 705, 706, 707; Joicey and Kayes 731, 732; Mabille and Boullet 836; Meyrick 903, 909, 910; Prout, 1092, 1095, 1096; Rothschild 1150, 1152.**

Trichoptera.

Navás 957 963.

Neuroptera.

Eshen-Petersen, 426, 429; **Navás**, 956, 957.

Diptera.

Alexander 19.

Bezzi, 123, 125; **Edwards** 410; **Enderlein**, 420; **Gedoelst**, 516, 517; **Lamb**, 784, 785; **Rouband & Villeneuve**, 1158; **Schmitz** 1184; **Townsend** 1311; **Villeneuve**, 1359, 1360, 1363.

Aphaniptera.

Fox 483.

Hemiptera.

Brain & Kelly, *Coccidae* 171; **Del Guercio**, *Aphidae* 351; **Gowley**, *Coccidae* 571; **Distant** 365; **Jeannel** 712, 714; **Montandon** 923; **Newstead**, *Coccidae* 971, 972; **Schouteden**, 1190; 1192, 1193, 1194, 1195, 1196, 1197, 1202.

Ellipoptera.

Ferris 438; **Waterston** 1383.

Psocoptera.

Enderlain, 422.

Lipoptera.

Waterston, 1388.

Isoptera.

Silvestri, 1240; **Schmitz** 1182.

Paraneuroptera.

Ris, 1126; **Schouteden** 1200; **Sjöstedt** 1244.

Orthoptera.

Giglio-Tos 532, 533, 535, 536; **Schouteden** 1191, 1201; **Sjöstedt** 1245.

Madagascar and Mascarene Islands.

Carl Nouveaux éléments américains dans la faune de Madagascar 237b.

Coleoptera.

Alluaud, 22, 24, 25, 26, 27; **Bourgoin** 165; **Champion** Seychelles 247; **Hustache** 676; **Lameere** 792; **Ley** 813; **Maulik**, Seychelles 884; **Peschet** 1034; **Pic**, 1051, 1068; **Pouillaude** 1087; **Scott**, Seychelles 1211.

Hymenoptera.

Cockerell 304; **Masi** Seychelles 877.

Lepidoptera.

Hampson, 604; **Kenrick**, 750; **Le Cerf**, 804; **Meyrick** 903; **Prout** 1095.

Diptera.

Bezzi Mauritius 125; **Hervé-Bazin** 635; **Villeneuve** 1357.

Hemiptera.

Distant, Seychelles, 363; **Newstead**, *Coccidae*, Mauritius, 972.

Paraneuroptera.

Sjöstedt, 1243.

Asia, Tropical and Eastern.

Including Japan, Formosa, Biluchistan, Afghanistan.

Insecta, collectively.

Champion, India 254; **Cockerell**, Burma, 294.

†**Cockerell**, Burma, 292, 295, 296, 297.

Fletcher, India, 469; **Navás**, Indo-China, 964.

Coleoptera.

Arrow, India, 42, 44; **Bénard**, India, 103; **Berlioz**, Tonkin, 116; **Bernhauer**, 117a; **Bourgoin**, 166, 167, 168; **Bourgoin**, Tonkin, 160; Indo-Chine, **Bourgoin**, 161, 162, 164; **Cameron**, Singapore, 234, 235; **Champion**, India, 248, 250; **Desbordes**, 354; **Fleutiaux**, 470, 471; **Fleutiaux**, Indo-Chine *Cicindelidae* Bull. Soc. ent. France 1917 pp. 48 and 49; **Grosclaude**, Coprophages de Tonkin, p. 106 Bull. Soc. ent. France 1917; **Heller**, Formosa, 633; **Janson**, India, 709; Tibet, 710; **Kleine**, 765; **Lamcere**, Cochin Chine, 789; Tonkin, 792; **Lesne**, Japan, 809; **Marshall**, India, 873, 874; **Niishima**, Japan, 978; **Pic**, 1051, 1052, 1057, 1068; **Pic**, India, 1055; **Pic**, Tonkin, 1061; **Pic**, China, 1065; **Scott**, Rangoon, 1211; **Takizawa**, Japan, 1286; **Wasmann**, India, 1380.

Hymenoptera.

Brues India, **210**; **Cockerell**, **303**, **304**; **Cockerell** Japan **303**; **Cockerell** China **309**; **Donisthorpe** Singapore, **374**; **Girault** India, **548**, **560**; **Morley** India, **932**; **Turner** India, **1328**, **1331**, **1332**; **Wheeler** Penang, **1402**.

Lepidoptera.

Ellis, **415**; **Hampson**, **605**, **606**; **Hampson** India, **603**; **Hampson** Formosa, **604**; **Joicey & Kaye**, **732**; **Joicey & Kaye** Tibet, **731**, **732**; **Le Cerf**, **804**; **Marumo** Japan, **876**; **Meyrick**, **903**; **Meyrick** India, **908**; **Nagano** Japan, **954**; **Nire** Japan, **979**; **Prout**, **1092**, **1093**, **1096a**; **Rhe-Philipe** India, **1119**; **Rothschild**, **1150**; **Seitz** and others, **1214d**; **Strand** Formosa, **1269**; **Swinhoe**, **1281–1284**; **Wileman & South**, Formosa, **1415**, **1417**, **1419**; **Wileman & South**, Japan and Formosa, **1418**, **1419**.

Trichoptera.

Navás, **963**.

Neuroptera.

Navás, **961**.

Diptera.

Alexander Burma, **17a**; **Awati** India, **54**; **Edwards**, **410**; **Felt** India **452**, **453**; **Koizumi** Formosa, **773**; **Lamb** India, **784**, Ceylon **785**; **Matsumura** Japan, **879**; **Ricardo** India, **1121**; **Sinton** India, **1241**; **Townsend** India, **1314**; **Yamada** Japan, **1444**.

Hemiptera.

Crawford India, *Psyllidae*, **332**; **Distant** *Homoptera*, **364**, **366**; **Goot** India, *Aphidae*, **564**; **Kuwana** Japan, *Coccidae*, **776**, **777**; **Maki** Japan, *Homoptera*, **856**; **Matsumura** Japan, *Cicadidae*, **878a**; **Matsumura** Japan, *Aphidae*, **880**, **881**; **Muir** Formosa, *Homoptera*, **944**; **Newstead** India, *Coccidae*, **972**; **Quaintance & Baker** *Aleurodidae*, **1097**.

Isoptera.

Bugnion Termites indo-malais, **215a**.

Oshima China, **1005**.

Lipoptera.

Uchida Japan, **1342**.

Uchida Formosa, **1343**.

Paraneuroptera.

Laidlaw India, **782**; **Ris** China, **1127**.

Orthoptera.

Borelli China, **154**; **Burr** Indo-China, **220**; **Giglio-Tos**, **532**, India, **535**; **Hebard** India, **625**; **Pantel** India, **1013**.

Collembola.

Carpenter India, **241**; **Kinoshita** Japan, **754** **755**.

Asiatic Archipelago.

Java to New Guinea, incl. Philippines.

Insecta, collectively.

Shelford Borneo, **1223**.

Coleoptera.

Arrow **43**; **Champion** Borneo, **248**; **Gestro** Philippines, **521**; **Grouvelle** N. Guinea **584**; **Grouvelle** Philippines **585**; **Heller** Philippines, **633**; **Kleine** **762**, **763** **765**; **Kleine** Java, **761**; **Kleine** Borneo, **764**; **Peschet** Sumatra, **1033**; **Pic** **1051** **1057**; **Pic** Philippines, **1037**; **Schultze** Philippines, **1207**; **Weise** N. Guinea, **1391**; **Zimmermann** Borneo, **1446**.

Hymenoptera.

Baker Philippines, **74**, **75**, **76**; **Cockerell** Philippines, **300**; **Doop** **376**; **Elliott**, **413**, **414**; **Fullaway** Philippines **504**; **Girault**, **559**; **Grandi** Java, **573**; **Turner**, **1328**; **Turner** and others, N. Guinea, **1340**.

Lepidoptera.

Durrant New Guinea, **386**; **Hampson**, **603–606**; **Joicey & Kaye**, **732**; **Joicey & Talbot** N. Guinea, **734**, **735**; **Le Cerf**, **804**; **Meyrick**, **903**; **Prout**, **1092**, **1093**; **Rothschild**, **1150**, **1151**, **1152**; **Rothschild** New Guinea, **1148**; **Seitz** and others, **1214d**; **Swinhoe**, **1281**, **1282**, **1283**, **1284**; **Wileman & South** Philippines, **1416**.

Neuroptera.

Esben-Petersen, **426**.

Diptera.

Alexander Philippines, **17**; **Bezzi** Philippines **122**; **Breemen, 173a**; **Citroen** Java, **278**; **Knab** Philippines, **768**; **Meyere, 902**; **Meyere** Java, **901**; **Parker** Philippines, **1015**; **Salm** Java, **1163**; **Schüffner,** und **Heyden, van der, 1204**; **Swellengrebel** Sumatra, **1278, 1278a**; **Townsend, 1314.**

Aphaniptera.

Fox Philippines, **484**; **Rothschild** New Guinea, **1147.**

Hemiptera.

Bergroth Philippines, **112**; **Crawford** Philippines, **332**; **Goot van der,** Java, *Aphidae*, **566**; **Montandon** New Guinea, **924**; **Moulton** Sumatra, *Homoptera*, **938**; **Muir** *Homoptera*, **944**; **Muir** Philippines, *Homoptera*, **940, 942**; **Muir** Borneo, *Homoptera*, **941**; **Quaintance & Baker** Java, *Homoptera*, **1097**; **Robinson** Philippines *Coccidae*, **1130.**

Isoptera.

Oshima Philippines, **1002.**

Thysanoptera.

Van Deventer Java, **1346.**

Orthoptera.

Borelli, 153, 158, 159, Philippines; **Giglio-Tos, 532, 535.**

Australia and Tasmania.

Coleoptera.

Aurivillius, 51; **Champion, 248**; **Kleine, 765**; **Lameere, 789**; **Lea, 796, 797, 798**; **Mjöberg, 920**; **Pic, 1057**; **Weise, 1391.**

Hymenoptera.

Dodd, 369; **Kriese, 489**; **Froggatt, 492, 495**; **Froggatt & Froggatt, 498**; **Girault, 546, 547**; **Morley, 932**; **Turner, 1328, 1330, 1331, 1335**; **Wheeler, 1406.**

Lepidoptera.

Hampson, 604, 606; **Le Cerf, 804**; **Lower, 825**; **Meyrick, 903**; **Rothschild, 1150**; **Seitz, Draudt, Rothschild Strand, 1214d**; **Swinhoe, 1281**; **Turner, 1325.**

Neuroptera.

Esben-Petersen, 428.

Diptera.

Lamb, 784; **Ricardo, 1120**; **Taylor, 1288, 1289.**

Hemiptera.

Distant *Homoptera*, **365**; **Froggatt** *Coccidae*, **493**; **Muir** *Homoptera*, **744.**

Paraneuroptera.

Sjöstedt, 1242; **Tillyard, 1302.**

Orthoptera.

Giglio-Tos, 532.

Collembola.

Schött, 1187.

North America.

Insecta, collectively.

Cockerell Colorado, **299**; **†Cockerell, 294, 312, 313**; **Lutz** Arizona J. N. York ent. Soc. **25** p. 142; **May, 886a**; **Needham, 967**; **Tothill** Canada, **1308**; **Weiss, 1393,** New Jersey **1394.**

Coleoptera.

Andrews, 38; **Blaisdell, 129**; **Blaisdell & Reynolds, 130**; **Blatchley, 131**; **Carnochan, 238**; **Chamberlin, 244, 245**; **Davis** *Ammodonus* Staten isld.; J. N. York ent. Soc. **25** p. 126.

Fall, 443, 444, 445; **Fisher, 463, 464**; **Green, 579a**; **Leng, 806**; **Liljeblad, 816**; **Pierce, 1072a**; **Schaeffer, 1175, 1176, 1177**; **Van Dyke, 1351**; **Swaine** Canada, **1274.**

†Wickham, 1411, 1412.

Hymenoptera.

Banks, 80; **Beutenmuller, 120**; **W. Cockerell, 318**; **Crosby & Leonard, 338**; **Cushman, 342, 343**; **Dwight, 387**; **Felt, 450**; **Gahan, 507**; **Girault, 540, 541, 542, 543, 544, 548, 549, 550, 551, 553, 555, 556, 558**; **Hewitt** Canada, **641.**

Mickel Nebraska *Bembicinae*, Canad. Ent. **49** pp. 285–286.

Morrison, 936; **Myers, 951, 952**; **Parker, 1014**; **Rohwer, 1134–1139**; **Stevens, 1263**; **Viereck, 1356b**; **Wheeler** Alaska, **1407.**

Lepidoptera.

Barnes & McDunnough, 87, 88, 89, 90, 91; Bird, 126; Buchholz, 215; Busck, 222; Dyar, 391, 394–398, 405; Fountaine, 482; Grinnell, 582a; Grossbeck, 583a; Lindsay, 817; Mabille & Boullet, 839; Malcolm, 856a; Meyrick, 903; Rothschild, 1150; Skinner, 1247; Swett, 1280; Wright, 1443.

Diptera.

Alexander, 18; Banks, 79; †Cockerell, 293; Cole, 320; Cresson, 334; Davidson, 344; Dietz, 362; Dyar, 339, 400, 401, 402, 403, Bahamas 406; Dyar & Knab, 408, 409; Felt, 451, 454; Gibson Canada *Eumerus strigatus*, p. 190 Canad. Ent. **49; Grossenbacher, 583b; Guthrie, 593; Hine, 645; Howard, Dyar & Knab, 662; Johannsen, 724; Johnson, 725, 726, 727; Jones, 736; Knab, 767; Malloch, 863, 864, 864a; Metcalf, 891; Seamans, 1214; Smith, 1249, 1250; Townsend, 1311, 1312, 1313; Van Duzee, 1348, 1349, 1350; Williston, 1433.**

Aphaniptera.

Fox, 483.

Hemiptera.

Adkins Ohio, *Heteroptera*, pp. **58-61** Ohio Nat. **18; Baker** *Aphidae* **68, 73,** *Homoptera* **70; Davidson** *Aphidae*, **345; Davis** *Homoptera*, **348; Davis** *Cicada hieroglyphica* Long isld., J. N. York ent. Soc. **25** p. 196; **Del Guercio** *Aphidae*, **351; Drake, 379, 380, 381; Essig** *Psyllidae*, **431; Ferris** *Coccidae*, **459; Florence** *Coccidae*, **472; Gibson, 526, 527** and *Homoptera*, **528; Gibson** Missouri *Jassidae* Canad. Ent. **49** pp. 75 & 76; **Gibson & Wells** *Homoptera*, **530; Gillette** *Aphidae*, **538, 539; Heidemann, 630; Hollinger** *Coccidae*, **651; Knight, 770, 771, 772; Lathrop** *Homoptera*, **795; Osborn & Drake, 1000, 1001; Parshley, 1016, 1017, 1018; Patch** *Aphidae*, **1019; Quaintance & Baker** *Aleurodidae*, **1097; Sanders & De Long** *Homoptera*, **1164; Shinji** *Aphidae*, **1226, 1228, 1229, 1230; Stoner, 1226a** Iowa *Pentatomoidea*; **Stoner, 1266; Torre Bueno, 1304; Van Duzee, 1347; Wirtner, 1441.**

Thysanoptera.

Hood, 656.

Lipoptera.

McGregor, 848, 849, 850.

Paraneuroptera.

Combs, 322; Currie, 341; Fyles, 503; Garman, 511; Kennedy, 746, 749; Walker, 1368; Walker Prince Edward isld., pp. 117–119 Canad. Ent. **49; Whitehouse, 1409; Williamson, 1430.**

Orthoptera.

Fox, 486; Giglio-Tos, 532; Hebard, 624, 627; Folsom *Collembola*, **474.**

Central America.

Insecta, collectively.

Calvert & Calvert, 229; Herrera, 634.

Coleoptera.

Champion, 246, 252; Schaeffer Lower California, **1175; Zimmermann, 1446.**

Hymenoptera.

Beutenmuller, 120; Cockerell, 298, 301, 302, 304–307, 315, 317; Turner, 1338.

Lepidoptera.

Closs, 284; Dyar, 388; Hall, 596; Hampson, 604, 605; Houlbert, 660; Le Cerf, 804; Mabille & Boullet, 837; Prout, 1092; Rothschild, 1150, 1152.

Neuroptera.

Navás, 963.

Diptera.

Howard, Dyar & Knab, 662; Townsend, 1310.

Hemiptera.

Davis Lower California, *Homoptera*, **347; Enderlein** *Psyllidae*, **423.**

Paraneuroptera.

Calvert, 239.

Orthoptera.

Borelli, 155; Caudell Mexico, Insec. inscit. **5** p. 28; **Giglio-Tos, 532; Hebard, 624, 625, 626, 628; Rehn, 1111.**

Antilles.

Incl. Bermudas; excl. Trinidad.

Coleoptera.

Champion, 246; Leng & Mutchler, 806a.

Hymenoptera.

Brues, 213; Cockerell, 306; Girault, 557, 558; Hollard Isle of pines, **649.**

Lepidoptera.

Dyar Bahamas & Cuba, **392; Forbes 476a; Hall, 596; Hampson, 604.**

Diptera.

Felt, 451; Knab, 767; Ludlow, 830; Macdonald, 844.

Hemiptera.

Gibson, 529; Malenotti Barbados *Coccidae,* **860; Newstead** *Coccidae,* **971, 972.**

Thysanoptera.

Bagnall, 59.

Orthoptera.

Rehn & Hebard, 1112a.

South America, including Trinidad.

Insecta, collectively.

Bruch, 209; Jörgensen, 723; Navás, 965; Neiva & Penna, 969.

Coleoptera.

Achard, 5; Barber, 82; Brèthes, 177; Bruch, 204; Champion, 246, 251; Desbordes, 354; Germain & Kerremans, 518; Lameere, 789; Pic, 1051, 1057, 1058, 1061, 1067; Pierce, 1072a; Schenkling, 1178; Tremoleras, 1319.

Hymenoptera.

Brèthes, 175, 176, 179, 180, 183, 184, 185; Bruch, 207; Brues Patagonia **211; Cockerell, 301, 304, 305, 306, 307, 316; Porter, 1083, 1084; Rohwer, 1134; Roman, 1142; Santschi, 1166; Turner, 1328, 1330, 1332, 1338; Waterston, 1386.**

Lepidoptera.

Brèthes, [illegible] **174,** [illegible] **189; Closs, 285; Dyar, 393; Figueroa, 461, 462; Dognin, 371; Dyar, 388, 393, 394, 399; Hall, 596; Hampson, 603, 604, 605, 606; Houlbert, 660; Joicey & Kaye, 729, 730, 732; Jordan, 739; Le Cerf, 804; Mabille & Boullet, 836–839; Meyrick, 903, 904; Oberthur, 991; Prout, 1092, 1094; Rothschild, 1150, 1152; Seitz, 1214b, 1214c.**

Trichoptera.

Navás, 963.

Neuroptera.

Esben-Petersen, 426; Navás, 963, 966.

Diptera.

Brèthes, 178, 182, 186, 187, 188; Cresson, 334; Dyar & Knab, 407; Enderlein, 420; Lutz, 833; Townsend, 1310, 1311, 1313, 1315a.

Aphaniptera.

Fox, 483.

Hemiptera.

Bodkin *Coccidae,* 132; **Delétang** Tucuman *Belostoma grande,* p. 99 Physis 3; **Distant, 367; Enderlein** *Psyllidae,* **423; Malenotti** *Coccidae,* **860; Newstead** *Coccidae,* **971, 972; Quaintance & Baker,** *Aleurodidae,* **1097.**

Thysanoptera.

Brèthes, 181; Williams, 1428.

Paraneuroptera.

Navás Valparaiso p. 38 Revist. Chilena 21; **Williamson, 1431, 1432.**

Orthoptera.

Giglio-Tos, 532; Rehn, 1111.

III.—SYSTEMATIC.

General.

Relation of Pterygota and apterygota by abdomen, Crampton pp. 225–237, 2 pls.

Phylogeny, with three superorders for lower insects, Pandictyoptera, Panplecoptera, Panorthoptera; Crampton Ent. News 28 pp. 398 etc., pl.

Nervous System, HOLMGREN Stockholm Vet.-Ak. Handl. 56 No. 1 p. 207-269 figs.

Head of *Neuroptera*, *Mecoptera*, *Diptera*, *Trichoptera*, CRAMPTON Ann. ent. Soc. Amer. **10** p. 337–344.

Cervical structures CRAMPTON Ann. ent. Soc. Amer. **10** p. 187–197.

Insects described by Hope from African resin animé, and omitted from Catalogues, CHAMPION p. 7 and p. 244 Ent. Mo. Mag. **53**.

Gli insetti; continuation, ii pp. 481–536, BERLESE.

A naturalist in Borneo, SHELFORD London 1917 331 + 28 pp., 32 pls.

Insects in Costa Rica, CALVERT & CALVERT New York 577 pp.

Habits, interdependence, extinction of species, RABAUD Bull. Sci. France Belgique **50** pp. 287–380.

Mounting for microscope, HUIE Scott. Nat. **1917** pp. 219–229.

Labelling indications, HEIKERTINGER Wien. ent. Zeit. **33** pp. 253–258.

The pronunciation of insect names, MELANDER Bull. Brooklyn Ent. Soc. **11** 1916 p. 93–101.

Classical formation of names, MORICE & DURRANT pp. 435–438.

†Comments on the Commentry fossil insects, LAMEERE pp. 17–37 Bull. Soc. Zool. France **42**.

Recognition among insects; McINDOO Smithsonian Misc. coll. **68** No. 2 78 pp.

Distribution and rarity, WALSH Ent. Mo. Mag. **53** pp. 57, etc.

Climate, snow, and insect life, CRIDDLE pp. 77 80 Canad. Ent. **49**.

Figures of Indian economic insects, 34 pls., FLETCHER Rep. Proc., etc.

Neuropterodelphia supersect. n. for *Neuroptera*, *Trichoptera*, *Lepidoptera*, *Mecoptera*, *Diptera*, *Siphonaptera*, *Homoptera*, *Heteroptera*, *Clinoptera* and others.—*Plecopteradelphia* supersect. n. for *Plecoptera*, *Platyptera*, *Dermaptera*, *Notoptera*, *Zoraptera*, *Isoptera*, *Cheleutoptera*, *Phylloptera*, *Diphtheroptera*, *Orthoptera* and others.—*Palaeopteradelphia* supersect. n. for *Palaeoptera* and *Dictyoptera*, CRAMPTON p. 346 Ent. News **26**.

COLEOPTERA.

The *Coleoptera* attached to *Picea excelsa* with special attention to metamorphosis and habits, SAALAS Die Fichtenkäfer Finnlands, 547 pp. 9 pls. Part 1, General, and special part 1. This special part includes from Carabidae to Cucujidae, and describes many larvae for the first time. The table for determining larvae (announced in the full title) is to appear in part 2 of the special division.

Die Káferfauna der Färoer, MJŐBERG Ark. Zool. **10** No. 27 pp. 1–21 figs. 1–6.

List of spp. new to Sweden, FRISENDAHL Ent. Tidskr. **38** p. 298–301.

Supplement to catalogue of West-Indian *Col.*, LENG & MUTCHLER Bull. Amer. Mus. **37** pp. 191–220.

Flight of *Coleoptera*, DEMOLL Zool. Anz. **49** p. 285.

Collecting, BEARE Vasculum **1** pp. 75, etc.

CICINDELIDAE.

Colour, pattern, development, variation, structure of elytra, etc., SHELFORD Illinois biol. mon. **3** pp. 399–528, 32 plates.

Cicindela halli **sp. n.** New Zealand p. 350, BROWN Bull. N. Zeal. Inst. **1**.—*C. antiqua* **sp. n.** North-western Australia, LEA Trans. R. Soc. S. Aust. **41** p. 121 pl. 12, fig. 1.—*Cicindela litterifera*, Larva (Japanese), SASAKI Konch. Sek., Gifu **21** p. 4.

Distypsidera pictipennis **sp. n.** Queensland, LEA, Trans. R. Soc. S. Aust. **41** p. 122.

Omus; variation, *cupreonitens* **sp. n.** California p. 49–55 pl. vi, BLAISDELL & REYNOLDS ent. News **28**.

Tetracha euphratica nigra = (*nigripennis* Ferr.), ANDRES p. 134 Bull. ent. Soc. Egypte **6**.

CARABIDAE.

Acropezum **subg. n.** vide *Bembidion*. Alluaud.

Agonum (? *Anchomenus*) *jeanneli* p. 98, *A. johnstoni* p. 99, *kilimanum* p. 100, *A.* (? *Europhilus*) *kenyense* p. 101, *A. oribates* p. 102, *kinangopinum* p. 103, **spp. n.**, Africa, ALLUAUD Ann. Soc. ent. France **86**.

Amara; feeding-habits, HARDY pp. 99, 100 Lancash, Nat. **10.**

Anisodactylus zabroides **sp. n.** Madagascar p. 319, ALLUAUD Bull. Soc. ent. France **1917**, 1918.

Anoplogenius dieganus p. 243, *madagascariensis*, *mocquerysi*, p. 244, **spp. n.**, Madagascar, ALLUAUD Bull. Soc. ent. France **1917.**

Anthracus (*Balius*) *hauseri* **sp. n.** Mosul p. 268, REITTER Wien. ent. Zeit. **33** 1914.

Aphaenops hustachei **sp. n.** Pyrenees p. 313, *tiresias axilensis* and *t. tisiphone* **subspp. n.** p. 314., JEANNEL Bull. Soc. ent. France **1916.**

Atelothrus metromenoides, *cheloniceps*, p. 246, *debilis*, *fractistriatus*, p. 247, **spp. n.**, Hawaiia, PERKINS Ent. Mo. Mag. **53.**

Bembidion mixtum altipeta subsp. n. p. 86, B. (*Hypsipezum* subg. n. p. 87) *kenyense* p. 88, *B.* (*Acropezum* subg. n. p. 88) *mackinderi* p. 89, **spp. n.** Africa, ALLUAUD Ann. Soc. ent. France **86.**

Brachynus midoli **sp. n.** Madagascar p. 138, ALLUAUD Bull. Soc. ent. France **1917.**

†*Carabus macander* var. n. *sangamon* p. 139 fig., WICKHAM Amer. J. Sci. **44.**

Carenidium leai p. ix f. 1., MUSGRAVE & ZECK p. 85 Austral. Zool. **1.**

Ceroglossa africana p. 86, *madagascariensis* p. 87, **sp. n.**, ALLUAUD Bull. Soc. ent. France **1917.**

†*Chlaenius plicatipennis* **sp. n.** U.S. p. 143, WICKHAM Amer, J. Sci. **44.**

Colliuris decorsei **sp. n.** Madagascar p. 137, ALLUAUD Bull. Soc. ent. France **1917.**

†*Cratacanthus florissantensis* **sp. n.** Florissant miocene p. 464 pl. xxxvii f. 2, WICKHAM P. U.S. nat. Mus. **52.**

Demetrida sinuata **sp. n.** New Zealand p. 370, BROWN Bull. N.Z. Inst. **1.**

Dichrochile insignis p. 359, *rugicollis*, *flavipes*, p. 360, **spp. n.**, New Zealand, BROWN T.c.

Diglymma basale, p. 358, *thoracicum* p. 359, **spp. n.**, New Zealand, BROWN T.c.

Dromius (*Monodromius*) *transbaikalicus* **sp. n.** p. 267, REITTER Wien. ent. Zeit. **33** 1914.—*D. johnstoni* **sp. n.** Kilimandjaro p. 106, ALLUAUD Ann. Soc. ent. France **86.**

Dyschirius; in Egypt, BOEHM p. 45 Bull. soc. ent. Egypte **7** 1916.

Ega montevidensis **sp. n.** p. 436, TREMOLERAS Physis **3.**

Eurylychnus cylindricus f. 4, MUSGRAVE & ZECK p. 85 Austral. Zool. **1.**

Graniger (*Coscinia*) *semirubricus* **sp. n.** Lebanon p. 265, REITTER Wien. ent. Zeit. **33** 1914.

Harpalus gregoryi **sp. n.** Africa p. 94, ALLUAUD Ann. Soc. ent. France **86.**—*H. iris* **sp. n.** Madagascar p. 319, ALLUAUD Bull. soc. ent. France **1917** 1918.

†*Harpalus ulomaeformis* p. 464, pl. xxxvii, f. 3, *redivivus* p. 465, pl. xxxix f. 1, **spp. n.**, Florissant miocene, WICKHAM P.U.S. nat. Mus. **52.**

Helluapterus niger, f. 3, MUSGRAVE & ZECK p. 85 Austral. Zool. **1.**

Helluarchus robustus, f. 2, p. 86, MUSGRAVE & ZECK T.c.

Hypolithus hova **sp. n.** Madagascar p. 320, ALLUAUD Bull. Soc. ent. France **1917** 1918.

Hypsipezum **subg. n.** vide *Bembidion.* Alluaud

Kenyacus **gen. n.** *Acupalpini* p. 96, *hypsibius*, *acrobius*, **spp. n.**, Africa p. 97, ALLUAUD Ann. Soc. ent. France. **86.**

Lebia edithae **sp. n.** Tunis p. 264, REITTER Wien. ent. Zeit. **33** 1914.

Mecyclothorax perpolitus **sp. n.** Hawaiia p. 249, PERKINS Ent. Mo. Mag. **53.**

Metromenus audax, *hilaris*, **spp. n.**, Oahu p. 248, PERKINS T.c.

Metrothorax carteri **sp. n.** Oahu p. 249, PERKINS T.c.

Microlestes sicardi **sp. n.**. Marocco p. 363, BEDEL Bull. Soc. ent. France **1917** 1918.

Lasiocera analava, **sp. n.** Madagascar p.137, ALLUAUD Bull. Soc. ent. France **1917.**

Mecodema laterale p. 350, *chiltoni* p. 351, *politanum* p. 352, *rubripes, erraticum*, p. 353, *gratum* p. 354, *latulum, affinum*, p. 355, **spp. n.**, New Zealand, BROWN Bull. N. Zeald. Inst. **1.**

Melanodes; relations p. 227, *mecynonotus* Madagascar p. 228, *decorsa* Africa p. 229, **spp. n.**, ALLUAUD Bull. Soc. ent. France **1916.**

Metabletus kilimanus p. 107, *orinodromus* p. 108, **spp. n.**, Africa, ALLUAUD Ann. Soc. ent. France **86.**

Molops troglavensis p. 350 Bosnia, *holdhausi* Balkans p. 350, **spp. n.**, also subspp. n. *parnassicola eurytanicus, alpestris imitator*, p. 347, *a. ljubetensis, obtusangulus intermedius*, p. 348, *o. svilajensis* p. 349, *o. velebiticus* p. 350, *holdhausi dormitorius* p. 354, MÜLLER Ent. Mitt. **6.**

Nebria klinckowstroemi, MJOBERG Ark. Zool. **10** No. 27 p. 5 figs. 2–3.

Nesocidium auratum **sp. n.** Kilauea p. 250, PERKINS Ent. Mo. Mag. **53.**

Oodes sphaerodoides **sp. n.** Cameroons p. 294, ALLUAUD Bull. Soc. ent. France **1916.**—*O. prasinus* **sp. n.** Madagascar, ALLUAUD p. 136 Bull. Soc. ent. France **1917.**

Oopterus, minor, latifossus, p. 364, *suavis* p. 365, **spp. n.**, N. Zealand, BROWN Bull. N.Z. Inst. **1.**

Orinophonus **gen. n.** *Harpalini* p. 92, *kilimanus, hypsinomus*, **spp. n.**, Africa p. 93, ALLUAUD Ann. Soc. ent. France **86.**

Paraphaenops **subg. n.** vide *Trechus.*

†*Patrobus henshawi* **sp. n.** U.S. p. 140, WICKHAM Amer, J. Sci. **44.**

Platymetopus, colpophilus **sp. n.** Madagascar p. 320, ALLUAUD Bull. Soc. ent. France **1917** 1918.

†*Platynus insculptipennis* **sp. n.** Florissant miocene p. 463, pl. xxxvii f. 1, WICKHAM P.U.S. nat. Mus. **52.**—†*Platynus pleistocenicus* p. 141, *subgelidus, calvini*, p. 142, **spp. n.**, Illinois, WICKHAM Amer. J. Sci. **44.**

Polyaulacus kilimanus **sp. n.** Africa p. 106, ALLUAUD Ann. Soc. ent. France **86.**

Prymira Fairm. merged in *Ceroglossa*, ALLUAUD p. 87 Bull. Soc. ent. France **1917.**

Pterostichus aciphyllae p. 361, *egregialis, sculpturalis*, p. 362, *maiei* p. 363, **spp. n.** New Zealand, BROWN Bull. N.Z. Inst. **1.**

Reicheia kraussei **sp. n.** Sardinia p. 265, REITTER Wien. ent. Zeit. **33,** 1914.

Scaphinotus ridingsii var. n. *mononghelae* p. 36, LENG J. N. York ent Soc. **25.**

Scarites hypsipus p. 83, *hutchinsi* p. 84, *kenyensis, aberdarensis*, p. 85, **spp. n.** Africa, ALLUAUD Ann. Soc. ent. France **86.**

Scopodes instabilis **sp. n.** New Zealand p. 371, BROUN Bull. N. Z. Inst. **1.**

Scotodipnus jeanneli **sp. n.** Kenya p. 90, ALLUAUD Ann. Soc. ent. France **86.**

Selenoritus **gen. n.** *Lebiitae* p. 103, *ptolimaei* **sp. n.** Africa p. 104, ALLUAUD T.c.

Sphaerodes gracilior **sp. n.** Usambara p. 294, ALLUAUD Bull. Soc. ent. France **1916.**

Sympiestus frontalis **sp. n.** N. Zealand p. 370, BROUN Bull. N. Z. Inst. **1.**

Tachys (*Tachyura*) *ascendens* **sp. n.** Kilimandjaro p. 89, ALLUAUD Ann. Soc. ent. France **86.**

Tachys biby **sp. n.** Madagascar p. 318, ALLUAUD Bull. Soc. ent. France **1917,** 1918.

Tapinopterus (*Hypogeobium*) *jordai* **sp. n.** Mallorca p. 262, REITTER Wien. ent. Zeit. **33,** 1914.

Tarastethus convexus, diversus, p. 366, *halli, fovealis*, p. 367, *longulus* p. 368, *propinquus, optatus*, p. 369, **spp. n.** N. Zealand, BROUN Bull. N. Z. Inst. **1.**

Thaumastonyx **gen. n.** near *Anoplopenius, insidiosus* **sp. n.** Madagascar, ALLUAUD Bull. Soc. ent. France **1917.**

Thriscothorax subunctus **sp.n.** Kilauea, PERKINS p. 249 Ent. Mo. Mag. **53.**

Thyreopterus spinipennis **sp. n.** Usambara p. 295 fig., ALLUAUD Bull. Soc. ent. France **1916.**

Trechus (*Duvalius*) *sardous* **sp. n.** p. 378, *andreinii minozzii* subsp. n. p. 379, *gentilei ingaunus* subsp. n. p. 381, *jureceki* **sp. n.** p. 382 with var. *rasettii* p. 383, *carminatii* p. 383, **sp. n.** Italy figs., DODERO Ann. Mus. Doria **47.**

Trechus (*Trichaphaenops* subg. n.) *sollaudi* France p. 280, *T.* (*Paraphaenops* subg. n.) *breuilianus* **sp. n.** Tarragona p. 282 fig., JEANNEL Bull. Soc. ent. France **1916.**

Trichaphaenops **subg. n.** *vide Trechus.*

Tropicoritus **gen. n.** *Acupalpini, ruwenzorii* sp. n. Africa fig., ALLUAUD p. 95 Ann. Soc. ent. France **86.**

Zolus ocularius p. 365 **sp. n.** N. Zealand, BROUN Bull. N. Z. Inst. **1.**

Zuphium ascendens **sp. n.** Kilimandjaro p. 108 fig., ALLUAUD Ann. Soc. ent. France **86.**

PAUSSIDAE.

Paussus cridae **sp. n.** Congo p. 355, GESTRO Ann. Mus. Doria **47,** 1916; *P. crenaticornis* = (*cirenaicus* Fiori), ID. p. 358 T.c.

Platyrhopalides **subgen. n.** von *Platyrhopalus*, WASMANN Tydschr. Ent. **60** p. 393.

Pseudopaussus and *Monopaussus* are not *Paussidae*, GESTRO Ann. Mus. Doria **47.**

Stenorhopalus **subgen. n.** von *Platyrhopalus*, WASMANN Tydschr. Ent. **60** p. 393.

DYTISCIDAE.

Descriptive revision of Dytiscidae and Gyrinidae of Madagascar, Seychelles, etc., PESCHET Ann. Soc. ent. France **86** pp. 1–56.

Circulation, *Dytiscus*, BROCHER Arch. Zool. exp. **56** p. 445–490.

Agabus nebulosus ab. *abdominalis*, SCHOLZ p. 179 Ent. Mitt. **6.**

†*Agabus savagei* p. 143, *praelugens* p. 144, **spp. n.** U.S., WICKHAM Amer. J. Sci. **44.**

Bidessus quadripustulatus p. 166, *ornatellus* p. 167, *floridanus* p. 168, *suburbanus* p. 169, **spp. n.** U.S., FALL J. N. York ent. Soc. **25.**

Coelambus sylvanus **sp. n.** New York p. 169, FALL T.c.

Copelatus thiriouxi **sp. n.** Mauritius fig., PESCHET p. 29 Ann. Soc. ent. France **86.**

Hydaticus stappersi **sp. n.** Tanganyka p. 221, PESCHET Rev. Zool. Afric. **4,** 1916.

Hydroporus triangularis, pilatei, p. 170, *cocheconis* p. 171, *ohionis, shermani,* p. 172, *dixianus* p. 173, *dilatatus* p. 174 with var. *suffusus, sulcipennis* p. 175, *semiflavus* p. 176, *placatus* p. 177, *arizonicus, tigrinus,* p. 178, *carolinus, brevicornis,* p. 179, *dentellus* p. 181, *melsheimeri* p. 182, **spp. n.** U.S., FALL J. N. York ent. Soc. **25.**—*H. erythrocephalus* var. *faeroeensis* var. n., MJÖBERG Ark. Zool. **10** No. 27 p. 10 fig. 6.

Ilybius; ♂ genitalia pl. vii, *lapponicus* **sp. n.** p. 251, SCHOLZ Ent. Mitt. **6.** —*I. guttiger* = (*kiesenwetteri* W.), SCHOLZ p. 180 T.c.

Laccophilus inconspicuus p. 164, *schwarzi* p. 165, **spp. n.** U.S., FALL J. N. York ent. Soc. **25.**

Neptosternus regimbarti Sumatra p. 315, *africanus* Congo p. 316, **spp. n.**, *N. bicinctus* and *speciosus* Rég. to *Laccophilus* p. 317, PESCHET Bull. Soc. ent. France **1916.**

GYRINIDAE.

Aulonogyrus virescens var. n. *subtilis* p. 143, ZIMMERMANN Ent. Mitt. **6.**

Gyrinus guatemalensis **sp. n.** p. 162; ♂ genitalia of European *G.* pl. vi, ZIMMERMANN T.c.

Orectochilus spinosus **sp. n.** Borneo p. 167, ZIMMERMANN T.c.

HYDROPHILIDAE.

Taxonomical note, D'ORCHYMONT pp. 235–239 Bull. Soc. ent. France **1916.**

Laccobius purpurascens, stations, GALIBERT p. 270 Bull. Soc. ent. France **1916.**

Philhydrus estriatus **sp. n.** Florida p. 139, BLATCHLEY Canad. Ent. **49.**

Rygmodini trib., nov. for N. Zealand forms, D'ORCHYMONT pp. 235–239 Bull. Soc. ent. France **1916.**

Stygnohydrus posticalis **sp. n.** New Zealand p. 371, BROUN Bull. N.Z. Inst. **1.**

STAPHYLINIDAE.

Aleochara (*Rheochara*) *punica* **sp. n.** p. 283, NORMAND Bull. Soc. ent. France **1916.**

Antarctophytosus (= *Paraphytosus* Cam.), synonymy of species, CAMERON p. 233 Ent. Mo. Mag. **53.**

Arpediomimus **n. n.** for *Arpediopsis*, below, CAMERON p. 277 T.c.

Arpediopsis **gen. n.** *Arpediopsini* trib. n., *falklandicus* **sp. n.**, CAMERON p. 124 T.c.

Atheta devosi **sp. n.** Holland, EVERTS, Ber. Ned. Ent. Ver. **5** p. 18.

Biocrypta magnolia **sp. n.** Florida p. 236, BLATCHLEY Canad. Ent. **49.**

Dianous banghaasi p. 27, *chinensis* p. 28, **spp. n.** China, BERNHAUER Arch. Naturges. **81**, 1916.

Dimerus bisulciceps **sp. n.** New Zealand p. 374, BROUN Bull. N. Z. Inst. **1.**

Dinardopsis **gen. n.** p. 257, *solenopsidicola* La Plata **sp. n.** p. 258 figs., BRUCH An. Ci. Argent. **82.**

Eucibdelus quadricallosus **sp. n.** China p. 32, BERNHAUER Arch. Naturges **81.**

Geostiba lavagnei **sp. n.** France p. 352, PEYERIMHOFF Bull. Soc. Ent. France **1917**, 1918.

Lathrobium (*Lobathrium*) *gallienii* **sp. n.** France p. 311, FAGNIEZ Bull. Soc. Ent. France **1916.**—*L. semifumatum*, *basipenne*, **spp. n.**, Central Australia, LEA Trans. R. Soc. S. Aust. **41** p. 494-495.—*L. shermani* **sp. n.** Carolina p. 164, FALL Canad. Ent. **49.**

Leptotyphlus lavagnei **var. n.** *picardi* p. 138, LAVAGNE Bull. Soc. Ent. France **1917.**

Medon (*Hypomedon*) *fagniezi* **sp. n.** France p. 240, PEYERIMHOFF Bull. Soc. Ent. France **1916.**

Meotica exiliformis Joy, valid, BRITTEN p. 56 figs. Ent. Mo. Mag. **53.**

Mimocete punicum, NORMAND p. 286 Bull. Soc. Ent. France **1916.**

Myrmecochara (*Euthorax*) *solenopsidis* **sp. n.** Jujuy p. 263 figs., BRUCH An. Ci. Argent. **82.**

Octavius pyrenaeus lichtensteini, **subsp. n.**, and var. *berardi* p. 139, LAVAGNE Bull. Soc. Ent. France **1917.**—*O.* habitat, GALIBERT p. 166 Bull. Soc. Ent. France **1917.**

†*Olophrum interglaciale* **sp. n.** U. S. p. 145, WICKHAM Amer. J. Sci. **44.**

Omalium nigriceps **var. n.** *rufulum* p. 139, LAVAGNE Bull. Soc. Ent. France **1917.**

Oxypoda (*Podoxya*) *jeanneli* **sp. n.** Algeria p. 124, PEYERIMHOFF Ann. Soc. Ent. France **86.**

Paederus socius China p. 29, *densipennis* Yunnan p. 30, **spp. n.**, BERNHAUER Arch. Naturges. **81.**

Paractocharis **gen. n.** p. 154, *fucicola* **sp. n.** Singapore p. 155, CAMERON Ent. Mo. Mag. **53.**

Paraphytosus **gen. n.** for *Phyt. atriceps* Wat., CAMERON p. 125 T. c.—*Paraphytosus* see *Antarctophytosus.*

Philonthus kiautschauensis, *chinensis*, **spp. n.** China p. 30, BERNHAUER Arch. Naturges. **81.**

Phloeocharis bleusii, *bordei* p. 117, *caesariensis* p. 118, figs., **spp. n.** N. Africa, PEYERIMHOFF Ann. Soc. Ent. France **86.**

Pseudopasilia, characters and position CAMERON Ent. Mo. Mag. **52** p. 156.

Quedius (*Microsaurus*) *dryadum* p. 121 **sp. n.** *flavescens africanus* **subsp. n.** p. 123, N. Africa, PEYERIMHOFF Ann. Soc. Ent. France **86.**—*Q. kiangsiensis* **sp. n.** China p. 32, BERNHAUER Arch. Naturges. **81.**—*Q. hallianus* p. 372, *recticeps*, *megophthalmus*, p. 373, **spp. n.** New Zealand, BROUN Bull. N. Z. Inst. **1.**

Silusa aliena **sp. n.** China p. 33, BERNHAUER Arch. Naturges. **81.**

Staphylinus (*Platydracus*) *imperatorius*, *S.* (*Parocypus*) *kiautschauensis*, **spp. n.**, China p. 31, BERNHAUER T.c.

Stenus kuennemanni **sp. n.** Italy p. 182, BENICK Ent. Mitt. **6.**—*S. ampliventris* **var. n.** *wagneri*, BENICK p. 262 T.c.—*S. cautus*, *vafellus*, *macrocephalus*, synonymy, BENICK p. 332 Ent. Mitt. **6.**—*S. similis*, larva, BLAIR p. 175 Ent. Mo. Mag. **53.**—*S. calliceps* p. 28, *paradoxus* p. 29, **spp. n.** China, BERNHAUER Arch. Naturges. **81 1916.**

Stichoglossa nyttenboogaarti **sp. n.** Rotterdam [? brought from Russia], EVERTS p. 384 Ber. Ned. Ent. Ver. **4.**

Thamiaraea hospita suberis **subsp. n.** p. 124, PEYERIMHOFF Ann. Soc. Ent. France **86.**

Thinobius marinus **sp. n.** Singapore p. 155, CAMERON Ent. Mo. Mag. **53.**

Trogophloeus schneideri (= *hemerinus* Joy), CAMERON p. 156. T.c.

Xantholinus (*Gyrohypnus*) *silvanus* **sp. n.** Algeria p. 120, PEYERIMHOFF Ann. Soc. Ent. France **86.**

PSELAPHIDAE.

Agatyrus **gen. n.** *Tyrini* p. 382 *fulvihirtus* **sp. n.** New Zealand p. 383, BROUN Bull. N. Z. Inst. **1.**

Bryaxis (*Brachygluta*) *madoni* **sp. n.** Atlas p. 125 fig., PEYERIMHOFF Ann. Soc. Ent. France. **86.**

Bythinus validus ab. n. *neresheimeri*, WAGNER p. 265 Ent. Mitt. **6.**

Exeirarthra angustula p. 374, *longiceps* p. 375, **spp. n.** New Zealand, BROUN Bull. N. Z. Inst. **1.**

Fossiger **gen. n.** Clavigerinarum, *desmuthi*, **sp. n.** Vorderindien, WASMANN Tyds. Ent. **60** p. 405.

Fustiger indicus **sp. n.** Vorderindien, WASMANN p. 399 T.c.

Fustigerillus **gen. n.** Clavigerinarum p. 400, *fusicornis* **sp. n.** p. 401 Vorderindien, WASMANN T.c.

Metopioxys gallardoi **sp. n.** Argentina p. 461, BRUCH Physis **3.**

Mirini, trib. nov., distinct from *Euplectini*, RAFFRAY p. 107 Bull. Soc. ent. France **1917.**

Paliger **gen. n.** Clavigerinarum p. 402, *latirostris* **sp. n.** Vorderindien, WASMANN Tyds. Ent. **60** p. 403.

Phormiobius **gen. n.** *Tyrini* p. 381, *halli* **sp. n.** New Zealand p. 382, BROUN Bull. N. Z. Inst. **1.**

Plectophloeus (*Speleoplectus* subg. n.) *fiorii* **sp. n.** Italy, MINOZZI p. 168 Bull Soc. ent. ital. **48.**

Pselaphus urquharti p. 379, *oviceps* p. 380, **spp. n.** New Zealand, BROUN Bull. N. Z. Inst. **1.**

Sagola unicalis p. 376, *dickensis*, *robustula*, p. 377, *hectorii* p. 378, **spp. n.** New Zealand, BROUN T.c.

Speleoplectus, **subg. n.** *vide Plectophloeus.* Minozzi.

Vidamus gracilipes **sp. n.** New Zealand p. 379, BROUN Bull. N. Z. Inst. **1.**

SCYDMAENIDAE.

Euconnus viator p. 128, *E.* (*Microscydmus*) *transfuga* p. 129 figs., PEYERIMHOFF Ann. Soc. ent. France **86.**

Neuraphes atlanticus, *icosiensis*, p. 126, *humeralis* p. 127, **spp. n.** Algeria, PEYERIMHOFF T.c.

TRICHOPTERYGIDAE.

Swedish spp., ERICSON Ent. Tidskr. **38** p. 207.

Ptenidium aprinum **sp. n.** Algeria p. 134, PEYERIMHOFF Ann. Soc. ent. France **86.**

Ptiliolum africanum p. 134, *atlanticum* p. 135, **spp. n.** Algeria figs., PEYERIMHOFF T.c.

Ptilium asperum **sp. n.** Britain p. 126, BRITTEN Ent. Mag. **53.**

SILPHIDAE.

Anemadus tenuipes **sp. n.** Algeria p. 130, *subcostatus* Reiche = (*sulcipennis* Fairm.) *orchesiodes* F. = (*pulchellus* Reitt.) p. 131, PEYERHIMHOFF Ann. Soc. ent. France **86.**

Breuilia jeanneli p. 209 fig., *urdialensis* p. 210 fig., **spp. n.** Spain, BOLIVAR Bol. Soc. espan. **17.**

Choleva matthiesseni **sp. n.** Kultscha p. 263, REITTER Wien. ent. Zeit. **33** 1914.—*C. barnevillei* T. = (*anceyi* Reitt.), PEYERIMHOFF Ann. Soc. ent. France **86** p. 131.

Colon pubescens Luc. = (*perrisi* Reitt. = *leprieuri* Pic.), PEYERIMHOFF T.c.

Diamesus osculans var. n. *reductus* p. 2, PIC Mél. **26.**

Dissochaetus dubius **sp. n.** Brazil p. 3, PIC T.c.

Inocatops spinifer p. 383, *granipennis*, *elongellus*, p. 384, *separatus* p. 385, **spp. n.** New Zealand, BROUN Bull. N. Z. Inst. **1.**

Nargus aptus **sp. n.** Algeria p. 129, PEYERIMHOFF Ann. Soc. ent. France **86.**

Necrophorus vespilloides var. n. *subinterruptus*, *interruptus* var. n. *pasqueti*, *vestigator* var. n. *viturati*, PIC p. 21 Echange **33.**

Necrophorus didymus var. n. *peruvianus*, *insularis* var. n. *humeralis*, PIC p. 2 Mél. **26.**

Oneilia bedeli **sp. n.** Africa p. 2, PIC T.c.

Parapropus stilleri **sp. n.** Croatia p. 263, REITTER Wien. ent. Zeit. **33** 1914.

Royerella argodi **sp. n.** Dauphiné with *hustachei* subsp., *tarissani* 3 subspp. n., *lentensis vertacomicora* and *ferrierensis*, FAGNIEZ p. 91 Bull. Soc. ent. France **1917.**

Silpha bituberosa, COOLEY J. econ. Ent. **10** 1917 p. 94–102 pl. v.

Speocharis oxypterus **sp. n.** Santander p. 207 fig., *gracilicornis debilis* p. 208 subsp. n., BOLIVAR Bol. Soc. espan. **17.**

Thanatophilus irregularis **sp. n.** Japan p. 2, PIC Mél. **26.**

Zeagyrtes **gen. n.** near *Choleva*, *vitticollis* **sp. n.** New Zealand, BROUN p. 386 Bull. N.Z. Inst. **1.**

Zenocolon **gen. n.**, *laevicollis* **sp. n.** New Zealand, BROUN p. 387 T.c.

SCAPHIDIIDAE.

Cyparium semirufum **sp. n.** Tonkin, PIC p. 3 Mél. **22.**

Scaphidium rufipenne **sp. n.** Madagascar, PIC p. 3 Mél. **22.**—*S. donckieri*, *pygidiale*, **spp. n.** Madagascar p. 3, PIC Mél. **24.**—*S. bisbimaculatum* Brazil, *semilimbatum* China, *madecassum* Madagascar, **spp. n.** p. 3, PIC Mél. **26.**

HISTERIDAE.

Abraeus globulus lucidus subsp. n. p. 137, PEYERIMHOFF Ann. Soc. ent. France **86.**

Adelopygus **gen. n.** p. 186 near *Probolosternus*, *decorsei* **sp. n.** Africa p. 187, DESBORDES Ann. Soc. ent. France **86.**

Apobletes kinduensis **sp. n.** Congo p. 214, DESBORDES Bull. Soc. ent. France **1917.**

Atholus ; type, table, DESBORDES pp. 318–326 Ann. Soc. ent. France **85.**

Epitoxus revoili **sp. n.** Somaliland p. 189, DESBORDES Ann. Soc. ent. France **86.**

Eretmotus peyerimhoffi **sp. n.** Marocco p. 332, THÉRY Bull. Soc. ent. France **1917,** 1918.

Gnathoncus ; table, AUZAT pp. 206–208 Bull. Soc. ent. France **1917.**—*G. buyssoni* **sp. n.** France p. 184, AUZAT T.c.

Hetaerius zelus p. 165, *strenuus* p. 167, **spp. n.** California, FALL Canad. Ent. **49.**

Hister pygolacvis **sp. n.** Congo p. 215, DESBORDES Bull. Soc. ent. France **1917.**—*Hister* (*Zabromorphus*) *clermonti* **sp. n.** Rhodesia p. 182, *H. schimperi*, *foveifrons*, p. 184, *chaloti*, *ellenbergeri*, p. 185, **spp. n.** Algeria, DESBORDES Ann. Soc. ent. France **86.**

Hololepta ; synopsis and synonymy of oriental, DESBORDES pp. 297–301 Ann. Soc. ent. France **85.**

Hololepta ; african species table, DESBORDES pp. 165–168 Ann. Soc. ent. France **86.**—*H. burgeoni* p. 212, *sedistriata* p. 213, **spp. n.**, Congo, DESBORDES Bull. Soc. ent. France **1917.**—*H.* (*Leionota*) *sirpus* p. 389, *decemstriata*, *bifoveolata*, p. 393, *caseyi* p. 396, **spp.n.**, U.S., *populnea* var. n. *punctata* p. 382, *quadridentata* subspp.n. *floridae* p. 391, *minor* p. 392, and var. *striatifera*, p. 392, *vicina* var. n. *californica* p. 395, larvae pl. xxxiii, CARNOCHAN Ann. ent. Soc. Amer. **10.**

Iliotona **gen. n.** type *cacti* Lec., CARNOCHAN p. 396 T.c.

Macrolister ; table, DESBORDES pp. 313–317 Ann. Soc. ent. France **85.**

Omalodes ; table of *Cornillus* subg. pp. 311–313, *tuberculifer* **sp. n.** Goyaz p. 312, DESBORDES T.c.

Pachycraerus aerosus **sp. n.** Congo p. 214, DESBORDES Bull. Soc. ent. France **1917.**—*P. brevitarsis*, *cupreoviridis*, p. 179, *cylindriformis* p. 180, **spp.n.**, Africa, DESBORDES Ann. Soc. ent. France **86.**

Platysoma, table of oriental pp. 302–311, *palonense* **sp. n.** Burma p. 306, DESBORDES Ann. Soc. ent. France **85.**

Saprinus emendatus **sp. n.** Algeria p. 136, synonymy of numerous algerian species p. 138–140, PEYERIMHOFF Ann. Soc. ent. France **86.**—*S. innesbeyi* **sp.n.** Cairo, *ruber* var. n. *pilimargo*, REITTER p. 137 Bull. Soc. ent. Egypte **6.**—*S.* (*Hypocaccus*) *nodieri* p. 325, *submetallescens* p. 326, **spp.n.**, Senegal, DESBORDES Bull. Soc. ent. France **1917** 1918.—*S.* (*Hypocaccus*) *caeruleoniger* **sp. n.** E. Africa p. 191, DESBORDES Ann. Soc. ent. France **86.**—*S. carinifer* p. 167, *ciliatoides* p. 168, *martini* p. 169, **spp. n.**, U.S., FALL Canad. Ent. **49.**—*S. rugifrons* = (*radiosus* Mars.), *S. interpunctatus*, DESBORDES p. 230 Bull. Soc. ent. France **1916.**

Tribalister striatellus **sp. n.** Rhode isld. p. 165, FALL Canad. Ent. **49.**

NITIDULIDAE.

Amystrops monticola **sp. n.** Luzon p. 337, GROUVELLE Philipp. J. Sci. D. **12.**

Axyra tibialis **sp. n.** Dahomey p. 107, GROUVELLE Bull. Soc. ent. France **1917.**

Brachypeplus (*Selis*) *decoratus* p. 329, *B. denticeps* p. 330, *marginellus* p. 332, **spp. n.**, Philippines, GROUVELLE Philipp. J. Sci. D. **12.**

Carpophilus (*Eidocolastus*) *subplanus* p. 339, *C. sinuatus* p. 341, **spp. n.**, Philippines, GROUVELLE T.c.

Cillaeoxsis maynei **sp. n.** Congo p. 129, GROUVELLE Rev. zool. afric. **4** 1914.

Glischrochilus 4-guttatus, 3 varr. n., PIC p. 21 Echange **33.**

Ithyphenes bakeri **sp.n.** Luzon p. 334, GROUVELLE Phillipp. J. Jci. D. **12.**

d/ *Oturovana* **gen.n.** near *Ipidia* p. 135, *carpophiloides* **sp. n.** Cairo p. 186, REITTER Bull. Soc. ent. Egypte **6** 1915.

Meligethes curtulus p. 130, *M.* (*Acanthogethes*) *rufulus*, p. 131, **spp.n.**, Congo, GROUVELLE Rev. zool. afric. **4** 1914.

Platynema angusta **sp.n.** Luzon p. 336, GROUVELLE Philipp. J. Sci. D. **12.**

Prometopia bakeri **sp. n.** Luzon p. 343, GROUVELLE T.c.

Soronia brunnescens **sp. n.** Florida p. 238, BLATCHLEY Canad. Ent. **49.**

Brachypterus unicolor ab. *rufipes* p. 388, *glaber* ab. *rufofemoratus* p. 389, abb. n. Holland, EVERTS Ber. Ned. Ent. Ver. **4.**

MONOTOMIDAE.

Bactridium californicum **sp. n.** p. 169, FALL Canad. Ent. **49.**

TROGOSITIDAE.

Grynoma setigera p. 387, *clavalis*, *proxima*, p. 388, *pallidula* p. 389, **spp. n.**, New Zealand, BROUN Bull. N.Z. Inst. **1.**

Nemosoma breviatum **sp. n.** Algeria p. 329, PEYERIMHOFF Bull. Soc. ent. France **1917** 1918.

Tenebroides foveatus **sp. n.** Florida p. 142, BLATCHLEY Canad. Ent. **49.**

BYTURIDAE.

Byturus unicolor, egg, CROSBY & LEONARD p. 438 Ent. News **28.**

ADIMERIDAE.

Monoedidae to replace *Adimeridae*, BLATCHLEY p. 141 Canad. Ent. **49.**

DERODONTIDAE.

Derodontus raffrayi **sp. n.** Italy p. 296 fig., GROUVELLE Bull. Soc. ent. France **1916.**

COLYDIIDAE.

Apistus africanus **sp. n.** p. 133, GROUVELLE Rev. Zool. afric. **4** 1914.

Aprostoma simplex **sp. n.** Congo p. 135, GROUVELLE Rev. zool. afric. **4** 1914.

Machlotes angustatus **sp. n.** Congo p. 136, GROUVELLE T.c.

Xuthia granosa **sp. n.** Congo p. 135, GROUVELLE T.c.

CUCUJIDAE.

Laemophloeus nebulosus **sp. n.** Congo p. 138, GROUVELLE Tc.

Pediacus depressus, habits, CHAMPION p. 173 Ent. Mo. Mag. **53.**

Silvanus amabilis **sp. n.** Congo p. 140, GROUVELLE Rev. zool. afric. **4** 1914.

CRYPTOPHAGIDAE.

Loberus fauveli **sp. n.** New Caledonia p. 122, GROUVELLE Bull. Soc. ent. France **1917.**

MYCETOPHAGIDAE.

Esarcus iolensis **sp. n.** Algeria p. 140 fig., PEYERIMHOFF Ann. Soc. ent. France **86.**

Litargus nobilis **sp. n.** Africa centr. p. 278, GROUVELLE Bull. Soc. ent. France **1916.**

Mycetophagus sulcicollis, alni, **spp. n.**, India p. 53, CHAMPION Ent. Mo. Mag. **53.**

DERMESTIDAE.

Attagenus plebeius, larval life, ILLINGWORTH p. 287 P. Hawai. ent. Soc. **3.**

†*Dermestes larvalis* **n. sp.** Burma in amber p. 43 fig., COCKERELL Psyche **24.**

Trogoderma khapra **sp. n.** India p. 482, ARROW Ann. Nat. hist. **19.**—*T. tarsale*, starvation, WOODSEKALEK Science **46** p. 366.

BYRRHIDAE.

Byrrhus pilula, larva fig., CHAMPION p. 269 Ent. Mo. Mag. **53.**

Chelonarium sparsum **sp. n.** Cambodia p. 2, PIC Mél. **23.**—*C. obscuripenne* **sp. n.** Formosa p. 3, PIC Mél. **26.**

Simplocaria battandieri **sp. n.** Algeria p. 371, PEYERIMHOFF Bull. Soc. ent. France **1917** 1918.

Syncalypta spinosa, New York, LENG p. 128 fig. J. N. York Ent. Soc. **25.**

HETEROCERIDAE.

Heterocerus maritimus = (*britannicus* Kuw.), CHAMPION p. 235 Ent. Mo. Mag. **53.**

PSEPHENIDAE.

Psephenus : larva figs., LAHILLE p. 247 Physis **3.**

LUCANIDAE.

Mitophyllus mandibularis p. 390, *cristatellus* p. 391, **spp. n.**, New Zealand, BROUN Bull. N. Z. Inst. **1.**

Nigidius montanus p. 171 Philippines, *acutangulus* p. 173 Formosa, **spp. n.**, HELLER Ent. Mitt. **6.**

PASSALIDAE.

Austropassalus **gen. n.** (*Austropassalinae*) group n.), *hultgreni* **sp. n.** Queensland, MJÖBERG Ark. Zool. **11** No. 3 p. 11.

Aulacocyclus tambourinensis **sp. n.** Queensland, MJÖBERG T.c. p. **10.**

SCARABAEIDAE.

Some notes on burrowing, WARREN pp. 412 and 413 Ent. News **28.**

Coprini.

Aphodius bonnairei, habits, CABANÈS pp. 57–60 Miscell. ent. **23.**

Geotrupes ; rearing, habits, MAIN Pr. S. Lond. ent. Soc. **1916–17** pp. 18–22 pl.

Heliocopris isidis, flight, BAY pp. 144–149 Bull. Soc. ent. Egypte **6.**

Trichiorhyssemus babaulti **sp. n.** India p. 167, BÉNARD Bull. Soc. ent. France **1917.**

Melolonthini.

Aserica variegata **sp. n.** Congo p. 111, ARROW Bull. ent. Res. **8.**

Asthenopholis, the four species, ARROW p. 60 Ann. Nat. Hist. **19.**

Automolus melancholicus, propygidialis, South Australia, *tridentifrons* Western Australia, *brunneus* Queensland, **spp. n.** LEA Trans. R. Soc. S. Aust. **41** p. 559–562 pl. 37 fig. 146–147.

Caulobius caviceps **sp. n.** Western Australia, LEA p. 520 pl. 37 fig. 108 and 151 T.c.

Dicranocnemus burchelli **sp. n.** S. Africa p. 62, ARROW Ann. Nat. Hist. **19.**

Diphucephala regalis Queensland, *nigritarsis* New South Wales, **spp. n.**, LEA Trans. R. Soc. S. Aust. **41** p. 123–127.

Eusoma eximia **sp. n.** New Zealand p. 389, Broun Bull. N.Z. Inst. **1.**

Gouna burchelli **sp. n.** S. Africa p. 61, Arrow Ann. Nat. Hist. **19.**

Haplonycha octoarticulata, mixta, interocularis, gymnopyga, bimucronata, novemarticulata, cara, iridipennis, semiopaca, opaca, ruficollis, South Australia, *erythrocephala* Western Australia, *villosa, dilatata,* Queensland, **spp. n.,** Lea Trans. R. Soc. S. Aust. **41** p. 499–512 pl. 34 fig. 24–25.

Heterochelus melanopygus **sp. n.** S. Africa p. 61, Arrow Ann. Nat. Hist. **19.**

Holotrichia serrata = (*Neolepidota obscura* Blackb.), Arrow p. 64 T.c.

Lachnosterna spp., larvae, bacterial disease, Northrup Agric. Exp. Sta. Michigan Tech. Bull. No. **18** 1914 p. 1–37 ff. 1–22.

Lepidiota rothei and *bovilli* Blackb. are one, Arrow p. 64 Ann. Nat. Hist. **19.**

Leptolepis **gen. n.** for *Empecta major* Fairm., Ley p. 34 fig. Insecta **7.**

Liparetrus niger, insignis, semicastaneus, lepidopygus, trichosternus, compositus, apicalis, obscurior, nudus, trichopygus, basicollis, semiflavus, Western Australia, *laciniatus, albovillosus, unidentatus, irregularis, pallens,* Queensland, *carus, melaleucae, puncticeps, lissapterus, flavipennis, longidens, flavus, mimicus, flavicornis,* South Australia, *bimaculatus* Northern Territory, *semiatriceps* Australia, *nigriclavus* New South Wales, **spp. n.,** Lea Trans. R. Soc. S. Aust. **41** p. 531–557 pl. 37 fig. 116–135.

Maechidius savagei, conspicuus, squamipennis, sculptipennis, South Australia, *hoplocephalus* Queensland, *insularis, lateripennis,* Northern Territory, **spp. n.,** Lea p. 513–518 pl. 37 fig. 88–94 T.c.

Nematoserica **gen. n.,** *caerulea* **sp. n.** Borneo, Arrow p. 64 Ann. Nat. Hist. **19.**

Ocnodus unidentatus Queensland, *bidentatus* South Australia, *bilobus, simplex,* North-Western Australia, *tridentatus* Northern Territory, **spp. n.,** Lea Trans. R. Soc. S. Aust. **41** p. 522–526 pl. 37.

Odontria obsoleta **sp. n.** New Zealand p. 390, Broun Bull. N.Z. Inst. **1.**

Phyllotocidium bimaculiflavum **sp. n.** New South Wales, Lea Trans. R. Soc. S. Austr. **41** p. 127.

Polyphylla sicardi **sp. n.** Marocco p. 363, Bedel Bull. Soc. ent. France **1917,** 1918.

Pseudotrochalus concolor, Arrow p. 111 Bull. ent. Res. **8.**

Rhizotrogus ochraceus and *solstitialis,* distinguished, Lamb p. 210 Ent. Mo. Mag. **53.**

Sciton flavocastaneus **sp. n.** South Australia, Lea Trans. R. Soc. S. Aust. **41** p. 521 pl. 37 fig. 109.

Sparrmannia flava **sp. n.** p. 59, *similis* p. 60, **spp. n.** S. Africa, Arrow Ann. Nat. Hist. **19.**

Tricholepis lineata p. 30 figs., *albosquamosa* p. 31 figs., *bouvieri* p. 32 figs., **spp. n.** Madagascar, Ley Insecta **7.**

Triodonta = (*Euronycha* Pér.), Arrow p. 61 Ann. Nat. Hist. **19.**

Euchirini.

Euchirini of India, Arrow pp. 362–376 Faun. brit. Ind. Lam. **2** figs.

Rutelini.

Rutelinae and Euchirinae of India, Arrow 387 pp. 4 pls. Faun. brit. Ind. Lam. **2.**

Adoretus seriesetosus Sind, *lobiceps* Bombay f. 67 p. 303, *duplicatus* Ceylon p. 308, *lacustris* p. 314, flavus p. 315, *fraterculus* p. 316, *gemmifer* p. 317 f. 69, Bengal, *nasalis* Assam p. 320, *ariel* Assam, *victoriae* Burma p. 326, *vulpeculus* Andaman islds. p. 327, *affinis* Assam p. 331, *debilis* Pusa p. 332, *kanarensis* Bombay p. 337 f. 72, *sorex* Ceylon p. 339, *posticalis* p. 340, *plebeius* p. 342, Burma, *horticola* Kumaon, *punjabensis,* p. 344, *pusillus* Bombay p. 354, *fusciceps* Burma p. 355, **spp. n.,** *birmanus* var. n. *flavescens* p. 314, Arrow T.c.

Adorrhinyptia **gen. n.** p. 273 type *R. dorsalis* Burm., *fusca* **sp. n.** Bombay p. 275, Arrow Faun. brit. Ind. Lam. **2.**

Adorrhinyptiini n. div. p. 273, Arrow T.c.

Anomala nigrovaria Burma p. 149 fig. 38, *clerica* Sikkim p. 150, *singularis* Madras p. 151, *tincticeps* Burma p. 154, *nilgirensis* p. 155; *variivestis* Assam p. 156, *anguliceps* Burma, *tristis* Dehra Dun, p. 158, *madrasica* p. 159, *mollis* Burma p. 162, *andamanica* p. 165, *biharensis* Pusa p. 166, *stenoptera* Burma p. 167, *vivida* Assam p. 169, *procrastinator* Ceylon p. 170, *aegrota*, *praenitens*, Assam, p. 171, *stenodera* Bhutan p. 172, *euops* Bengal p. 173, *dilatata* p. 177, *fallacissa* p. 179 Burma, *viridilatera* Bengal p. 181, *pomona* Bombay, *dalbergiae* Madras, p. 184, *aenigma*, *leporalis*, p. 187, *decipiens* Burma, *siliguria* India, p. 188, *laeta* Bombay p. 189, *aureoflava* Burma p. 190, *comma* Sikkim, *ciliatipes* Assam, p. 193, *longiceps* Burma p. 194, *cinderella* p. 196, *galerucina* p. 199, Sikkim, *lignea* p. 202, *semiaurea*, *connectens*, p. 205, *diversipennis* p. 206, Burma, *tinctipennis* Assam, *agilis*, p. 207, *bella*, Sikkim, *mystica* Burma, p. 208, *flavovaria* Assam p. 213, *corvina* Sikkim p. 214, *shanica* Burma p. 218, *pictipes* Assam p. 219, *densa* p. 221, *igniceps*, Burma, *angulicollis* Bengal, p. 222, *seminitens* Madras p. 223, *papuna* p. 224, *dawnensis*, Burma, *obtusicollis* Bengal, p. 225, *chrysochlora* Burma, *desiccata* Nicobar islds., p. 226, *indistincta* Assam, *chloropus*, p. 229, *peguensis*, *chlorocarpa* p. 230 Burma, *chlorosoma* Punjab p. 231, *chlorophylla* Burma p. 233, *rhodomela* Andaman islds. p. 235, *merula* p. 237 Assam, *trochanterica* Sikkim p. 238, *validipes* Assam p. 239, *xanthonota* Punjab p. 244, *amphilissa* Nepal p. 245, *chrysochroma* Burma, *xanthocoma* Assam, p. 246, *vittilatera* Madras p. 259, *isolata* Andaman islds. p. 260, *festiva* Sikkim p. 261, *parva*, *dohertyi*, Assam p. 264, *flavipes* India p. 266, *vestigator* Peshawar p. 379, **spp. n.**, *blanchardi* n.n. for *testacea* Bl. p. 160; ARROW Faun. brit. Ind. Lam. **2.**

Anoplanomala **gen. n.** p. 98 for *A. globulosa* Sh., ARROW T.c.

Callistopopillia lurida **sp. n.** India p. 93, ARROW T.c.

Dactylopopillia **gen. n.** type *P. virescens* Hope, ARROW p. 56 T.c.

Desmonycinae subf. n. for *Desmonyx*, ARROW p. 360 T.c.

Lissadoretus **gen. n.**, *pallidus* **sp. n.**, Peshawar; ARROW p. 293 f. 65 T.c.

Mimela terminalis Burma p. 115, *viridipes* Assam p. 116, *rugicauda* Sikkim p. 119, *aurelia* Burma p. 123, *pusilla* India p. 378, **spp. n.**, ARROW T.c.

Oxyadoretus **gen. n.** p. 281, *nasutus* f. 60, *laetus*, **spp. n.**, India p. 282, ARROW T.c.

Peperonota cristata **sp. n.** Burma p. 34, ARROW T.c.

Rhamphadoretus suillus **sp. n.** Pusa p. 291 f. 64, ARROW T.c.

Popillia patkaina p. 73, *patricia* p. 75 pl. i f. 12, Assam, *kanarensis* Bombay p. 377, **spp. n.**, ARROW T.c.

Rhinyptia laeviceps **sp. n.** Karachi p. 272, *meridionalis* var. n. *punctricollis* p. 271, ARROW T.c.

Schizadoretus **gen. n.**, *rufescens* **sp. n.** Pusa, ARROW p. 283 T.c.

Trichanomala **gen. n.** for *Pop. fimbriata* N., ARROW p. 95 T.c.

Dynastini.

Aneurystypus pachypus, *pilosicollis*, *inermicollis*, **spp. n.**, South Australia, LEA Trans. R. Soc. S. Aust. **41** p. 568–570.

Cavonus acutifrons **sp. n.** South Australia, LEA p. 567 pl. 34 fig. 29 T.c.

Cheiroplatys excavatus, *castaneus*, **spp. n.**, Queensland, Lea p. 571–573 pl. 34 fig. 36–39 T.c.

Cryptodus gigas New South Wales, *bilobus* Western Australia, **spp. n.**, LEA p. 573–575 pl. 34 fig. 40–41 T.c.

Ligyrus gibbosus, HAYES J. econ. Ent. **10** p. 253–261 pl. xii.

Nephrodopus enigmus niger var. n. Northern Territory, LEA Trans. R. Soc. S. Aust. **41** p. 575 pl. 34 fig. 34–35.

Novapus armatus **sp. n.** Western Australia, LEA p. 573 pl. 34 fig. 45–46 T.c.

Oryctes monoceros, life, HOBLEY J. E. Africa Soc. 6 p. 189.

Pseudoryctes semicalvus, *griseopilosus*, *ater*, South Australia, *nigripennis*, *validus*, Queensland, *semicrudus* Northern Territory, **spp.n.**, LEA Trans. R. Soc. S. Aust. **41** p. 562–566 pl. 35.

Cetoniini.

Notes on the "Fauna of Brit. India," JANSON pp. 109–111 Tr. ent. Soc. London **1917.**

Notes on food and anatomy, BORDAS C. R. Ac. Sci. Paris **164** pp. 150–153.

Cetoniidae of Madagascar, continuation with plates, POUILLAUDE Insecta **7** 8 pls.

Anatona selousi **sp. n.** India p. 104, JANSON Tr. ent. Soc. Lond. **1917.**

Bombodes nigellus **sp. n.** Tonkin = (*vitalisi* ♀ B. 1914), BOURGOIN p. 254 Bull. Soc. ent. France **1916.**

Bombodes affinis **sp. n.** Tonkin p. 231, BOURGOIN Bull. Soc. ent. France **1917.**

Bricoptis rufescens var. n. *obscura* p. 139 pl. vii f. 8, *parumpunctata* **sp. n.** Madagascar p. 141 pl. viii f. 4, POUILLAUDE Insecta **7.**

Calometopidius **gen. n.**, *cavellae* **sp. n.** Africa, BOURGOIN p. 119 Bull. Soc. ent. France **1917.**

Calometopus lusitaniae **sp. n** Africa p. 117, BOURGOIN T.c.

Celidota; descriptions and figs., POUILLAUDE pp. 50–54 pls. iii & iv Insecta **7.**

Cetonia (*Potosia* ?) *chalcitis* p. 69, *C.* (*Protaetia* ?) *albovermiculata* p. 70, **spp. n.**, Indo-China, BOURGOIN Bull. Soc. ent. France **1917.**

Cetonia delagrangei, synonymy, ALFIERI Bull. Soc. ent. Egypte **9** p. 99.

Clerota rigifica p. 105, *arrowi* p. 106, **spp. n.**, India. JANSON Tr. ent. Soc. Lond. **1917.**

Clinteria garnieri **sp. n.** Laos p. 232, BOURGOIN Bull. Soc. ent. France **1917.**

Coptomia consobrina **sp.n.** Madagascar p. 248, BOURGOIN T.c.

Coryphocera mimula **sp.n.** Laos p. 367, BOURGOIN Bull. Soc. ent. France **1917** 1918.

Cosmiorrhina **gen. n.** near *Cosmiomorpha*, *bilobiceps* **sp. n.** Laos, p. 365, BOURGOIN T.c.

Cyriodera tuberculicollis var. n. *concolor* p. 59, POUILLAUDE Insecta **7.**

Diceros nigrocyaneus Yunnan p. 247, *inermiceps* Tonkin p. 248, **spp. n.**, BOURGOIN Bull. Soc. ent. France **1917.**

Euchroea spininasuta, ♂, BOURGOIN p. 246 T.c.

Glycyphana huyghei **sp. n.** Tonkin p. 232, BOURGOIN T.c.

Heterophana mira **sp. n.** Madagascar p. 247, BOURGOIN T.c.

Heterosoma alluaudi var. n. *vittatum* pl. 124 pl. vii f. 15, *subnitidum* **sp. n.** Madagascar p. 131 pl. vii f. 11, POUILLAUDE Insecta **7.**

Ingrisma mayi **sp. n.** Laos p. 69, BOURGOIN Bull. Soc. ent. France **1917.**

Ingrisma viridipallens **sp. n.** Tonkin p. 366, BOURGOIN Bull. Soc. ent. France **1917** 1918.

Ischiopsopha violacea **sp. n.** Louisiade Arch. p. 6, JANSON Ent. Mo. Mag. **53.**

Macronota argodi, *bruyanti*, **spp. n.**, Tonkin p. 297, BOURGOIN Bull. Soc. ent. France **1916.**—*M. elegantula*, *garnieri*, **spp. n.**, Tonkin p. 68, BOURGOIN Bull. Soc. ent. France **1917.**—*M. magnierei* p. 321, *aubaili* p. 323, Laos, *luteovaria* Yunnan p. 324, **spp. n.**, BOURGOIN Bull. Soc. ent. France **1917** 1918.

Micreuchilia **gen. n.** for *Pygora versicolor* Waterh., POUILLAUDE p. 164 Insecta **7.**

Moriaphila rufescens **sp. n.** Madagascar p. 92 pl. vii f. 13, POUILLAUDE T.c.

Mycteristes tibetanus **sp. n.** p. 5, JANSON Ent. Mo. Mag. **53.**

Parachilia bufo var. n. *nigricans* p. 101 pl. viii f. 9, *compacta* var. n. *rubripennis* p. 102 pl. viii f. 13, *pupurea* var. n. *nigripes* p. 103 f. 15; *ochracea* p. 105 pl. v figs. 26 & 30, *testaceipennis* p. 109 f. 24, **spp. n.**, Madagascar, POUILLAUDE Insecta **7.**

Pareuchilia tarsalis var. n. *nigropilosa* p. 163 pl. viii f. 20, POUILLAUDE T.c.

Protaetia ? *fuscovirens* **sp. n.** Tonkin p. 298, BOURGOIN Bull. Soc. ent. France **1916.**

Protaetia rubrocuprea **sp. n.** Tonkin p. 70, BOURGOIN Bull. Soc. ent. France **1917.**

Pseudochalcothea ritsemae **sp. n.** Rangoon p. 107, JANSON Tr. ent. Soc. Lond. **1917.**

Rhomborrhina conosternon **sp. n.** Tonkin p. 298, BOURGOIN Bull. Soc. ent. France **1916.**—*R. nitida, nigriventris, sapphirata,* **spp. n.,** Tonkin p. 69, BOURGOIN Bull. Soc. ent. France **1917.**

Tetraodorrhina lucens with var. *gracilis* p. 71, pl. viii f. 27, *plana* p. 76 pl. v. f. 6, *cincta* p. 78 pl. v f. 13, **spp. n.,** Madagascar, POUILLAUDE Insecta **7.**

Thaumastopeus nigrovirens **sp. n.** Laos p. 298, BOURGOIN Bull. Soc. ent. France **1916.**

Trichius campagnei **sp. n.** Tonkin p. 232, BOURGOIN Bull. Soc. ent. France **1917.**—*T.* (?) *vuilleti* **sp. n.** Tonkin p. 298, BOURGOIN Bull. Soc. ent. France **1916.**

BUPRESTIDAE.

List of Congo Buprestidae, SCHOUTEDEN pp. 320–338 Rev. zool. afric. **4** 1916.

Notes on North american; CHAMBERLIN pp. 129–139 166–169 Ent. News **28.**

Larvae of Buprestidae, 9 pls., BURKE Bull. U. S. Dep. Agric. Ent. **437** 8 pp.

Acmaeodera squamosa **sp. n.** Egypt p. 131, THERY Bull. Soc. ent. Egypte 1912.

†*Acmaeodera burmitina* **sp. n.** p. 323, COCKERELL Ann. Amer. ent. Soc. **10.**

Agrilus willcocksi **sp. n.** Egypt p. 129, THERY Bull. Soc. ent. Egypte **1912.**—*A. burkei* **sp. n.** California p. 287, FISHER Canad. Ent. **49.**—*A. germaini* p. 627 **sp. n.** Chile, GERMAIN & KERREMANS An. Univ. Santiago **120** 1907.

Ampheremus **gen. n.** near *Nanularia* p. 68, *cylindricollis* **sp. n.** California p. 69, FALL Ent. News **28.**

Anthaxia karsantiana **sp. n.** Taurus p. 5, PIC Echange **33.**

†*Brachyspathus* **gen. n.,** *curiosus* **sp. n.** Florissant miocene p. 466 pl. xxxviii figs. 2 & 3, WICKHAM P. U. S. Nat. Mus. **52.**

Chrysobothris dolata, ♂, CHAMBERLIN p. 137, Ent. News **28.**

Curis oyarcei **sp. n.** Chile p. 614 & 629 & 630, GERMAIN An. Univ. Santiago **120** 1907.

Dactylozodes cylindrica p. 621, *cuyana* (Philippi) p. 623, **spp. n.,** Chile, GERMAIN & KERREMANS T.c.

Ectinogonia chalyboeiventris **sp. n.** Chile p. 609, GERMAIN & KERREMANS T.c.

Mastogenius laevifrons **sp. n.** Chile p. 629, GERMAIN & KERREMANS T.c.

Pachyschelus undularius, metamorphosis, BRUCH Physis **3** pp. 30–36 2 pls.

Phaenops & *Melanophila,* BEDEL Bull. Soc. ent. France **1917** p. 275–277.

Philandia **gen. n.** p. 623 near *Disoderes, araucana* **sp. n.** Chile p. 625, GERMAIN & KERREMANS An. Univ. Santiago **120** 1907.

Pithiscus trifasciatus p. 615, *chalyboeofasciatus, angulatus,* p. 617, **spp. n.,** Chile, GERMAIN & KERREMANS T.c.

Sphenoptera trispinosa, habits, ALFIERI Bull. Soc. ent. Egypte **9** p. 15.

Steraspis squamosa, oviposition, WILLCOCKS p. 137 Bull. Soc. ent. Egypte **1912.**

Taphrocerus elongatus, metamorphoses, figs., BRUCH An. Ci. Argent. **82.**

Trachykele, sp., CHRYSTAL p. 946 figs. Agric. Gaz. Canada **4.**

ELATERIDAE.

Classification and phylogeny of Elateridae, larvae; HYSLOP Ann. ent. Soc. Amer. **10** p. 241–263 figs.

Agriotes obscurus, larva and pupa, FORD Ann. appl. Biol. **3** p. 97–114, 2 pls.

Athous (*Grypocarus*) *sardiniensis* **sp. n.** p. 266, REITTER Wien. ent. Zeit. **33** 1914.

Dima indica, yunnana, **spp. n.,** FLEUTIAUX p. 256 Bull. Soc. ent. France **1916.**

†*Elater burmitinus* **sp. n.** p. 325, COCKERELL Ann. Amer. ent. Soc. **10.**

Monocrepidius vuilleti n. n. for *flavobasalis* Hell., FLEUTIAUX p. 231 Bull. Soc. ent. France **1916.**

Psephus chatanayi n. n. for *rufinus* Hell., FLEUTIAUX p. 231 T.c.

Tetralobus fortnumi life-history p. 894 figs., FROGGATT Agric. Gaz. N.S.W. **28.**

EUCNEMIDAE.

Fornax garretai n. n. for *longicornis* Hell., FLEUTIAUX p. 231 Bull. Soc. ent. France **1916**.

RHIPIDOCCRIDAE.

Callirhipis laosensis **sp. n.** p. 3, PIC Echange **23**.

DASCILLIDAE, CYPHONIDAE.

Atopidocyphon **gen. n.** near *Atopida, marginatum* **sp. n.** Tonkin, PIC p. 3 Mél. **23**.

Cyphon atrocinctum **sp. n.** Tonkin p. 2, PIC T.c.

Ptilodactyla atricollis, vuilleti, Tonkin p. 299, *rufithorax* Bolivia p. 300, **spp. n.**, PIC Bull. Soc. ent. France **1916**.—*P. rouyeri* Java, *daemoniformis* Banguey, *madurensis* India, p. 3, *lajoyei* Saigon, *robusta, medanensis,* Sumatra, *granulata* Borneo, p. 4, **spp. n.**, PIC Mél. **22**.

Scirtes giganteus **sp. n.** Africa p. 270, CHAMPION Ent. Mo. Mag. **53**.

MALACODERMIDAE.

Life history and habits of north-american Lampyridae, WILLIAMS pp. 11–13 J. N. York ent. Soc. **25**.

Development of luminous organs, *Photuris,* HESS pp. 304–310 Ent. News **28**.

Light-emission, MCDERMOTT pp. 53–61 Canad. Ent. **49**.

Aplocnemus nigricornis var. n. *testaceofemoralis,* PIC p. 22 Echange **33**.

Attalus (*Mixis*) *inermipennis, bonnefoii,* **spp. n.** S. Africa p. 3, PIC Mél. **25**.—*A. rufoapicalis* **sp. n.** Formosa p. 6, PIC Mél. **26**.

Balanophorus inaequalis **sp. n.** Australia p. 15, PIC Echange **33**.

Balanophorus notaticollis Australia, *dohertyi* Obi, p. 10, *macassarensis, apicalis, testaceicolor,* New Guinea, *humeralis* Banguey, p. 11, **spp. n.**, PIC Mél. **25**.

Brachyhedybius **gen. n.**, *sinuatus* **sp. n.** New Guinea, PIC p. 10 Mél. **25**.

Cantharis podabriformis p. 160, *subaeneipennis* p. 161, **spp. n.** China, PIC Bull. Soc. ent. France **1917**.—*C. tumlongana* **sp. n.** India p. 25, PIC Bull. Soc. Zool. France **42**.—*C. indica* **sp. n.** p. 4, PIC Echange **33**.—*C. longitarsis* var. n. *bisbigemina, pallida* var. n. *pseudoassimilis,* PIC p. 13 T.c.—*C. monstrosipennis* p. 6, *quadratithorax, chapaensis,* Tonkin, *pallidocincticollis* Tibet, p. 7, **spp. n.**, PIC Mél. **22**.—*C. luteohirsuta, atridens,* **spp. n.** Tonkin p. 5, PIC Mél. **23**.—*C. lineatofemoralis* Bengal, *semistrangulata, inimpressipennis,* Cambodia, p. 4, *taliana* China, *m-notata* India, *mimilycus* Ecuador, *subopacicollis* Colombia, p. 5, **spp. n.**, PIC Mél. **24**.—*C. explanatocollis* Formosa, *testaceohumeralis* Malacca, **spp. n.** p. 5, PIC Mél. **26**.

Carphuromorphus **gen. n.**, *validicornis* **sp. n.** Key isld., PIC p. 7 Mél. **25**.

Carphurotroglops **gen. n.** near *Carphurus, pulcher* **sp. n.** New Guinea, PIC p. 15 Echange **33**.

Carphurus rufonotaticeps Celebes, *subcaeruleipennis, homalioides,* Sumatra, *discoidalis, nigroabdominalis,* Banguey. p. 8, *lutunganus, malaccanus, niasensis, reflexicollis* Banguey, *albipes* New Guinea, p. 9, **spp. n.**, PIC Mél. **25**.—*C. particularicornis* **sp. n.** New Guinea p. 16, PIC Echange **33**.

Chauliognathus trifossicollis Bolivia, *brunneonotaticeps* Guiana, **spp. n.**, PIC Mél. **24**.

Danacaea monastirensis **sp. n.**, *picicornis* var. n. *elongatipennis,* PIC p. 22 Echange **33**.

Dasytiscus atrotibialis **sp. n.** Yunnan p. 5, PIC Mél. **26**.

Dilychnia costatipennis **sp. n.** Indo-China p. 6, PIC Mél. **22**.

Discodon caucaense **sp. n.** p. 6, PIC Mél. **24**.

Ebaeomorphus transvaalensis **sp. n.** p. 235, PIC Bull. Soc. ent. France **1917**.

Ebaeomorphus transvaalensis var. n. *rufoapicalis* p. 3, PIC Mél. **25**.

Falsolaius **gen. n.**, *curtipennis* **sp. n.** New Guinea, PIC p. 6 T.c.

Flabellohedybius **subg. n.** *vide Hedybius.* PIC.

Hedybioattalus **subg. n.**, *testaceicornis* **sp. n.** China, PIC p. 6 Mél. **26**.

Hedybius atropygus, multimaculatus, simplicifrons, atripes, p. 2, *H.* (*Flabellohedybius* subg. n.) *maculatipennis* p. 3, **spp. n.**, Africa, PIC Mél. **25.**—*H. dentatithorax, inarmatus*, **spp.n.**, Africa p. 234, PIC Bull. Soc. ent. France **1917.**

Helcogaster impressiceps **sp. n.** Key isld. p. 10, PIC Mél. **25.**

Laius timorensis, kanarensis, p. 4, *fovicornis* India, *abyssinicus, dentatithorax* Philippines, *inarmatus* Java, *diversemaculatus* Banguey, p. 5, *unimaculatus* Borneo, *semidepressus* Manila, p. 6, **spp. n.**, PIC T.c.—*L. miraculus, apicicollis, aulacophoroides*, Northwestern Australia, *mirocerus* Victoria, *melanoderes, flavonotatus*, Northern Queensland, *sordidus, acervatus*, Queensland, *ammophilus* South Australia, *stenotarsus* Northern Territory, *concavifrons, flavifrons*, Western Australia, *filamentarius* Queensland and New South Wales, **spp. n.**, LEA Trans. R. Soc. S. Aust. **41** pp. 128–139 pls. 12–13.

Libnetis rugulosus Sumatra, *indicus*, **spp. n.** p. 6, PIC Mél. **23.**

Lucidina vitalisi p. 4, *tonkinea*, Tonkin, *roseonotata* Formosa, *malaccana, sumatrensis*, p. 5, **spp. n.**, PIC Mél. **22.**

Lycocerus brevilineatus, nigrobilineatus, **spp. n.**, Yunnan, PIC p. 4 Echange **33.**—*L. distinctecostatus* **sp. n.** Tonkin p. 7, PIC Mél. **22.**

Macrosilis brevior **sp. n.** Formosa p. 5, PIC Mél. **26.**

Malachius lineaticollis **sp. n.** Formosa p. 6, PIC T.c.

†*Malachius immurus* n.n. for *pristinus* W., WICKHAM p. 468 P. U. S. nat. Mus. **52,**

Malthinus maximiceps **sp. n.** Lebanon p. 13, PIC Echange **33.**

Malthodes tauricus n.n. for *pumilus* Motsch., PIC p. 13 T.c.—*M. pumilus*, CHAMPION p. 41 Ent. Mo. Mag. **53.**

Microcarphurus **gen. n.**, *borneensis, brunneiventris* Aru isld., **spp. n.**, PIC p. 7 Mél. **25.**

Polemius monini with var. *lineaticeps, transversicollis*, **spp. n.**, Indo-China, PIC Mél. **23.**

†*Podabrus cupesoides* **sp. n.** Florissant miocene p. 467 pl. xxxvii f. 4, WICKHAM P. U. S. nat. Mus. **52.**

Pseudoleptaleus piligibbosus Guiana, *cubanensis* Cuba, **spp. n.**, PIC p. 8 Mél. **22.**

Pyrocoelia incostata **sp. n.** Tonkin p. 6, PIC T.c.

Rhagonycha semilimbipennis, manzanalensis, **spp. n.**, Spain, *milleri* var. n. *bravardi*, PIC p. 17 Echange **33.**

Rhagophthalmus laosensis **sp. n.** p. 3, *tonkineus* var. n. *obscurus* p. 4, PIC Mél. **23.**

Silidius nolensis p. 123, *nitidior* p. 124, **spp. n.** Africa, PIC Bull. Soc. ent. France **1917.**—*S. atronotatus, sibutensis*, p. 6, *piceolobatus, multinotatus, subactus*, p. 7, **spp. n.**, Africa, PIC Echange **33.**—*S. atropygus, dimbrokianus*, p. 5, *lampyroides* p. 6, **spp. n.**, Africa, *benuensis* var. n. *curtipennis* p. 5, PIC Mél. **23.**—*S. subviolacea* p. 3 Madagascar, *carnoti* p. 4, **spp. n.**, PIC Mél. **24.**

Silis atrithorax **sp. n.** India p. 26, PIC Bull. Soc. Zool. France **42.**

Sphinginopalpus, liber, submaculicornis, **spp. n.**, Africa p. 4, PIC Mél. **25.**

Telephorus albolineatus **sp. n.** Florida p. 143, BLATCHLEY Canad Ent. **49.**

Trangliscus bicoloriceps sp. ? n. Dasmascus, PIC p. 2 Echange **33.**

Troglops innotaticollis, laminatus, Biskra, *barosi* Portugal, *incisus*, p. 1, *atriceps*, Algeria, *martini* Portugal, *caucasicus*, p. 2, **spp. n.**, *pyriventris notaticeps* subsp. n. p. 1, *pyriventris* var. n. *theryi* p. 5, PIC T.c.

Tylocerus atroapicalis, khurdanus, India, *ceylonicus*, **spp. n.** p. 19, PIC T.c.

Xamerpus perforatus **sp. n.** Ceylon p. 5, PIC Mél **26.**

CLERIDAE.

Synonymical and taxonomical notes on Cleridae, LESNE Bull. Soc. ent. France **1917** pp. 148 149.

Ababa = (*Prionodera* Wolc.), SCHAEFFER p. 133 J. N. York ent. Soc. **25.**

Allonyx 4-maculatus var. n. *ciliciensis*, PIC p. 17 Echange **33.**

Aulicus femoralis **sp. n.** Arizona p. 132, SCHAEFFER J. N. York ent. Soc. **25.**

Chariessa floridana **sp. n.** p. 133, SCHAEFFER T.c.

Clerus viduus = (*jouteli* Leng) p. 130, *rosmarus* var. n. *virginiensis*, *thoracicus* var. n. *subcostatus*, p. 131, SCHAEFFER T.c.

Cregya peninsularis **sp. n.** Lower California p. 132, SCHAEFFER T.c.

Cymatodera brevicollis **sp. n.** Arizona p. 130, SCHAEFFER T.c.

Hydnocera fuchsi = (*nunnenmacheri* Sch.), SCHAEFFER p. 132 T.c.

Pelonium ? fossipennе **sp. n.** Argentina p. 282, SCHENKLING Ent. Mitt. **6.**

Trichodes bicinctus **sp.n.** Texas p. 367, GREEN Ent. News **28.**—*T. apiarius* 3 varr. n., PIC p. 13 Echange **33.**

Trogodendron fasciculatum, larva, FROGGATT p. 563 pl. ii Agric. Gaz. N.S.W. **1916.**

LYMEXYLONIDAE.

Atractocerus tasmaniensis **sp. n.**, LEA Trans. R. Soc. S. Aust. **41** p 143 pl. 12 fig. 4.

PTINIDAE, ANOBIIDAE.

Clada abyssinica **sp. n.** p. 3, PIC Mél. **24.**

Diphobia myrmecophila Northern Territory, *foveata*, *metallica*, *intricata*, Queensland, **spp. n.**, LEA Trans. R. Soc. S. Aust. **41** pp. 153–156.

Ernobius ; Sharp's species, PIC p. 94 Bull. Soc. ent. France **1917** and pp. 2–4 sep. pag. Echange No. 380.—*E. pueli* & *pallidipennis*, LAVAGNE p. 61 Miscell. ent. **23** : PIC op. cit. **24** p. 1.

Paussoceros cremastogastri **sp. n.** North-western Australia, LEA Trans. R. Soc. S. Aust. **41** p. 153.

Polyplocotes perforatus Western Australia, *scabricollis* Northern Territory, *longipes* North-western Australia, **spp. n.**, LEA pp. 150–153 pl. 12 figs. 7–8 T.c.

Ptilinus tonkineus Tonkin, *gounellei* Brazil, **spp. n.** p. 2, PIC Mél. **23.**—*P. laticollis* **sp. n.** Abyssinia p. 2, PIC Mél. **24.**

Ptinobruchus martinezi **sp. n.** Guadarrama p. 234, ESCALERA Bol. Soc. espan. **17.**

Ptinus leucomelas, *caeruleipennis*, **spp. n.** Queensland, LEA Trans. R. Soc. S. Aust. **41** pp. 147–149.—*P. aethiopicus* var. n. *subelongatus* p. 2, PIC Mél. **24.**

Silisoptinus **gen. n.** near *Diegous*, *singularicollis* **sp. n.** Zanzibar, p. 2, PIC Mél. **24.**

† *Vrilletta monstrosa* **sp. n.** Florissant miocene p. 468 pl. xxxvii f. 5, WICKHAM P.U.S. nat. Mus. **52.**

BOSTRICHIDAE.

Boring lead, *Xylothrips gibbicollis*, FROGGATT Agric. Gaz. N.S.W. **28** p. 814.

CIOIDAE.

Bostrichus furcatus, omitted sp., is a *Ceracis*, LESNE p. 192 Bull. Soc. ent. France **1917.**

Ceracis compressicornis to *Cis*, LESNE p. 191 T.c.

Cis lineatosetosus Britain (imported) p. 87, *latifrons* England p. 89, **spp. n.**, POOL P.Z.S. Lond. **1917.**

Ennearthron sinense, *multidentatum*, **spp. n.** Yunnan p. 4, PIC Mél. **26.**

Macrocis grandicornis **sp. n.** Guiana p. 4, PIC T.c.

Rhopalodontus harmandi **sp. n.** Japan p. 191, LESNE Bull. Soc. ent. France **1917.**

Sphindocis **gen. n.** p. 170, *denticollis* **sp. n.** California p. 171, FALL Canad. Ent. **49.**

TENEBRIONIDAE.

S. African larvae, *Psammodes*, *Distretus*, *Anomalipus*, *Gonocephalum*, *Emyon*, *Zophosis*, *Trachynotus*, JACK S. Afric. J. Sci. pp. 84–98 3 pls.

Aemymone semirufa **sp. n.** Columbia p. 11, PIC Mél. **23.**

Anaedus impressicollis Mexico p. 19, *nitidissimus* Costa Rica, *rufitarsis* Venezuela, *abyssinicus*, *explanatus*, Africa, p. 20, *rufipes* Borneo, *rufocinctus*, *rufescens*, *geniculatus*, Amer. mer., p. 21, *silphoides*, *diversithorax*, *dentatus*, Africa, p. 22, **spp. n.**, PIC Mél. **24.**

Anaedus lineatopunctatus **sp. n.** Brazil p. 13, PIC Mél. **25.**

Asida nitida **sp. n.** Marocco p. 363, BEDEL Bull. Soc. ent. France **1917** 1918.

Aspisoma guyanensis, diversicollis, p. 22, *rufipennis, mendesensis, forticornis*, p. 23, *minutus, inhumeralis*, p. 24, **spp. n.** Amer. mer., PIC Mél. **24.**—*A. claveri* **sp. n.** Colombia p. 13, PIC Mél. **25.**

Basanaedus **gen. n.** near *Anaedus, luteomaculatus, fasciatus*, **spp. n.** Africa, PIC p. 11 Mél. **23.**

Basanus javanus var. n. *tonkineus* p. 10, PIC Mél. **23.**

Blaps ; egyptian, INNES Bey Bull. Soc. ent. Egypte **7** pp. 10–44 1916.

Blapstinus aciculus **sp. n.** Florida p. 275, BLATCHLEY Canad. Ent. **49.**

Borneocamaria **gen. n.** near *Agroecus, atra* **sp. n.** Borneo, PIC p. 17 Mél. **24.**

Calydoniomorpha **gen. n.** near *Camaria* p. 19, *brevicornis* **sp. n.** Brazil p. 20, PIC Mél. **26.**

Camaria inlimbata, distinctestriata, **spp. n.** Tonkin p. 18, PIC Mél. **24.**—*C. acutipennis* India, *spinipes, fasciculata, laevipennis*, p. 20, *superba, subrufescens, subopacipennis, brasiliensis, sinuaticollis*, p. 21, *impressipennis, paranana* with var. *minuta, semirufescens, purpureomaculata*, p. 22, **spp. n.**, PIC Mél. **26.**

Campsiomorpha **gen. n.** near *Camaria*, for *C. lata* Pic and *ducalis* Fairin., PIC p. 19 Mél. **26.**

Cerodolus tuberculatus, capitalis, p. 395, *sulcisternus* p. 396, **spp. n.** New Zealand, BROUN Bull. N.Z. Inst. **1.**

Coriogeton legalleni p. 8, *bourcieri*, Tonkin, *semipurpureum* Bengal p. 9, **spp. n.**, PIC Mél. **23.**

Curtolyprops **gen. n.**, *latipennis* **sp. n.** Ivory Coast, PIC p. 11 Echange **33.**

Drocleana tuberculata **sp. n.** Madagascar p. 17, PIC Mél. **24.**

Eleodes manni p. 221, with var. *variolosa* p. 223, *papillosa* p. 226, **spp. n.**, *cordata* var. n. *adulterina* p. 224 and *hybrida* p. 225, *parvicollis* var. n. *trita* p. 225, BLAISDELL Ent. News **28.**

Falsocamaria **gen. n.**, *obscura* **sp. n.** China, PIC p. 19 Mél. **26.**

Falsolophocnemis **gen. n.** near *Lophocnemis* p. 13, *sinuatipes, testaceitarsis, punctaticollis*, **spp. n.** New Guinea p. 14, PIC Mél. **23.**

Gibbostrongylium **subg. n.** vide *Stronglium.* PIC.

Helaeus conjunctus, waitei, **spp. n.** South Australia, LEA Trans. R. soc. S. Aust. **41** p. 577–579 pl. 36.

Helops (*Catomidius*) *pullatus* **sp. n.** Djurdjura p. 318, PEYERIMHOFF Bull. Soc. ent. France **1916.**

Hoplarion attritum **sp. n.** Marocco p. 364, BEDEL Bull. Soc. ent. France **1917**, 1918.

Hypophloeus rufobasalis **sp. n.** Taurus, *linearis* var. n. *perrisi*, PIC p. 5 Echange **33.**

Lyprops subopacus, subelongatus, p. 11, *plicatus* p. 12, **spp. n.** Africa, PIC T.c.—*L. crampeli, bruyanti*, p. 18, *vuilleti, chatanayi, buffeventi*, p. 19, **spp. n.** Africa, *pilosus* var. n. *semirufus* p. 18, PIC Mél. **24.**—*L. curticornis* Ningpo p. 13, *lajoyei, tonkineus*, Tonkin, *subacuminatus, vicinus*, Java p. 14, *borneensis, astrolabensis* New Guinea, *elongatus, subparallelus*, p. 15, *nitidior* p. 16, Africa, **spp. n.**, *curticollis* var. n. *ruficolor* p. 15, PIC Mél. **25.**—*L. diversiceps, assinicus*, p. 23, *cupripennis, sibutensis, auberti, armitagei*, p. 24, **spp. n.** Africa, PIC Mél. **26.**

Mesopatrum dubium **sp. n.** New Zealand p. 396, BROUN Bull. N. Z. Inst. **1.**

Mesotretis inconstans **sp. n.** Western Australia, LEA Trans. R. Soc. S. Aust. **41** p. 156.

Microgoniadera **gen. n.** p. 9, *hirsuta*, **sp. n.** Brazil p. 10, PIC Mél. **23.**

Microstrongylium **gen. n.**, *cyanicolle* **sp. n.** New Guinea, PIC p. 13 Mél. **23.**

Mictopsis longicornis **sp. n.** Madagascar p. 18, PIC Mél. **22.**

Ocnera ; Egyptian, BOEHM pp. 64–69 Bull. Soc. ent. Egypte **7** 1916.

Pachychile tumidifrons = (*cardaillaci* P.), PEYERIMHOFF p. 147 Ann. Soc. ent. France 86.

Pengalenganus **gen. n.** near *Anaedus, inaequalis* **sp. n.** Java, PIC p. 10 Mél. **23.**

Pheloneis halli p. 392, *angulatus* p. 393, *dubitatus, curtulus*, p. 394, **spp. n.** New Zealand, BROUN Bull. N.Z. Inst., **1.**

Philorea; notes, LESNE pp. 71 and 72 Bull. Soc. ent. France **1917.**

Plesiophthalmus substriatus **sp. n.** Tonkin p. 9, PIC Mél. **23.**

Pseudoblapida **gen. n.,** for *B. boliviensis* Pic, PIC p. 18 Mél. **26.**

Pseudolyprops sumatrensis, testacipes, **spp. n.** Sumatra p. 24, PIC Mél. **24.**—*P. rufus* p. 11, *raffrayi, latus, gabonicus,* Africa, *major* Java, *borneensis,* p. 12 **spp. n.,** PIC Mél. **25.**

Spinolyprops **gen. n.** near *Pseudolyprops, rufithorax* **sp. n.** Zanzibar with var. *lateralis,* PIC p. 12 -Mél. **23.**

Strongylium vientianense; subaeneum Yunnan, **spp. n.,** PIC p. 12 Echange **33.**—*S. griseofasciatum* p. 14 Nias, *infoveatum, semirufum, saccomanti, legalleni,* p. 15, *sulphureofemorale, bourcieri, semiviolaceum,* p. 16, *laosense, griseopilosum, monini, vitalisi,* p. 17, Tonkin, *rufotinctum* Java, *S.* (*Gibbostrongylium* subg. n.) *medanense, violacecolle,* p. 18, Sumatra, *pallidonotatum* Nias p. 19, **spp. n.,** PIC Mél. **23.**—*S. nigripenne* Africa, *multi impressum* China, *singularicolle* p. 23, *rufum, subdiscoidale,* Africa, **spp. n.,** *cyanipes* var. n. *annulipes* p. 24, PIC Mél. **25.**

Syrphetodes variegatus **sp. n.** New Zealand p. 392, BROUN Bull. N.Z. Inst. **1.**

Tentyria and *Tentyrina,* Egyptian, BOEHM p. 49–51 Bull. Soc. ent. Egypte **7** 1916.

Theresea **gen. n.** near *Eucyrtus* p. 12, *diversipennis* **sp. n.** Java p. 13, PIC Mél. **23.**

Xanthotopia semitestacea, gabonica, **spp. n.** Africa p. 23, PIC Mél. **26.**

Zophosis pinguis p. 508, *seminitida* p. 520, *minor* p. 524, *somalica* p. 526, *bayoni* p. 527, *collaris* p. 531, *burana* p. 533, *microphthalma* p. 537, *alluaudi* p. 546, *sinuata* p. 551, *decipiens* p. 553, *morula* p. 557, *neavei* p. 559, *obsti* p. 561, *aethiops* p. 564, *doriai* p. 566, *fartula* p. 573, *nyassae* p. 575, *rikatiae* p. 578, *micans* p. 580, *nitidicostis* p. 598, *gestroi* p. 600, *bouvieri* p. 601, *bottegoi* p. 602, *jeanneli* p. 608, *chalybaea* p. 611, *pulchra* p. 613, *arcifera* p. 614, *intermedia* (Aden) p. 619, **spp. n.** E. Africa, also many varr. n., CHATANAY Ann. Soc. ent. France **85.**

MONOMMIDAE.

Hyporhagus guanensis **sp. n.,** PIC p. 2 Mél. **22.**—*H. subopacus* **sp. n.** Brazil p. 4, PIC Mél. **26.**

Monomma pruinosum **sp. n.** Aldabra p. 162, CHAMPION Ann. Nat. hist. **19.**—*M. major, subovatum,* Africa, *laosense,* **spp. n.,** PIC p. 2 Mél. **22.**—*M. fulvum* **sp. n.** Malabar p. 4, PIC Mél. **26.**

CISTELIDAE OR ALLECULIDAE.

Cacoplesia viriditincta p. 163 pl. vi, f. 1 Aldabra, *annulipes* Seychelles p. 164 f. 2, **spp. n.,** CHAMPION Ann. Nat. Hist. **19.**

Ectenostoma annulipes, piceitarsis, delagoensis, zanguebarensis with var. *atripennis, submetallica* with var. *notatithorax,* **spp. n.** Africa p. 13, *viridithorax* var. n. *behanzini* p. 14, PIC Mél. **24.**

Isomira brunneosuturalis India p. 19, *formosana, discithorax* India, p. 20, **spp. n.,** PIC Mél. **22.**—*I. tonkinea* p. 19, *subelongata* Formosa, *thibetanum, latipennis, madurensis,* India p. 20, **spp. n.,** PIC Mél. **23.**—*I. semiflava* and *icteropa,* WAGNER pp. 341–346, Ent. Mitt. **6.**

Mycetochares puncticollis **sp. n.** Florida p. 276, BLATCHLEY Canad. Ent. **49.**

Nesogenomorpha **gen. n.,** *semioviolacea* **sp. n.** Madagascar, PIC p. 18 Mél. **22.**

Pseudocistela vuilleti, chatanagi, vohemarensis, **spp. n.** Madagascar, PIC p. 19 Mél. **22.**

Psilonycha usambarana **sp. n.** p. 19, PIC Mél. **22.**—*P. sibutensis, natalensis, subrufescens,* **spp. n.** Africa p. 14, PIC Mél. **24.**

Synallecula elongata, obscuripalpis, **spp. n.** Africa p. 26, PIC Bull. Soc. Zool. France **42.**

MELANDRYIDAE.

Allopoda arizonica californica, **spp. n.** p. 359, *lutea* = (*Hall. fuscosuturalis* Bl.), SCHAEFFER Canad. Ent. **49.**

Blatticephalus **gen. n.** p. 377, *B. adelotopus* **sp. n.** West Afrika, HELLER Tyds. Ent. **60** p. 378.

Brasilium **gen. n.** near *Conopalpus, gounellei, atrofasciatum,* p. 17, *atricorne* p. 18, **spp. n.,** Brazil, PIC Mél. **22.**

Callidircaea (*Cuphosopalpus* **subg. n.**) *trinotalus* **sp. n.** Brazil p. 15, PIC Mél. **22.**

Carebara californica **sp. n.** p. 357, SCHAEFFER Canad. Ent. **49.**

Ctenoplectron humerale Queensland, *rufobrunneum* South Australia, **spp. n.**, LEA Trans. R. Soc. S. Aust. **41** p. 172, 173.

Cuphosopalpus **subg. n.** vide *Callidircaea.* Pic.

Dircaea bimaculipennis **sp. n.** Australia, LEA Trans. R. Soc. S. Aust. **41** p. 173.

Eucinetomorphus trabuti **sp. n.** Algeria p. 371, PEYERIMHOFF Bull. Soc. Ent. France **1917,** 1918.

Eustrophinus superbus, 14-*maculatus*, *lineatopunctatus*, Amer. mer., *mexicanus*, p. 15, *crampeli*, *abyssinicus*, Africa p. 16, **spp. n.**, PIC Mél. **24.**—*E. bimaculatus* P. = (*biguttatus* Ch.), PIC p. 149 Bull. Soc. Ent. France **1917.**

Eustrophus rollei to *Synstrophus*, PIC p. 150 Bull. Soc. Ent. France **1917.**

Falsoconopalpus **gen. n.** p. 16, *obscurus* **sp. n.** Brazil p. 7, PIC Mél. **22.**

Holostrophus rouyeri **sp. n.** Java, *multinotatus* **var. n.** *tonkineus*, PIC p. 16 Mél. **24.**

Marolia grandis **sp. n.** Algeria p. 330, PEYERIMHOFF Bull. Soc. Ent. France, **1917,** 1918.

Microconomorphus **gen. n.** for *Con. curticollis* and *rufipes* Pic, PIC p. 150 Bull. Soc. Ent. France **1917.**

Nycteromimus **gen. n.** near *Mycterus* p. 166, *insularis* **sp. n.** Seychelles p. 167 pl. vi f. 4, CHAMPION Ann. Nat. Hist. **19.**

Orchesia (*Clinocera*) *lucida* **sp. n.** Algiers p. 143, PEYERIMHOFF Ann. Soc. Ent. France **86.**—*O. macilenta* Queensland, *multinotata* Victoria, **spp. n.** LEA Trans. R. Soc. S. Aust. **41** p. 170-171.

Paromarteon constans **sp. n.** Queensland, LEA p. 168 T.c.

Penthe almorensis **sp. n.** India p. 54, CHAMPION Ent. Mo. Mag. **53.**

Perakianus =(*Dapsiloderinus* Ch.), PIC p. 150 Bull. Soc. Ent. France **1917.**

Phloeotrya caracasensis Venezuela, *foveicollis* Java, **spp. n.**, p. 16, PIC Mél. **22.**—*P. undulata* **sp. n.** Venezuela p. 19, PIC Mél. **23.**—*P. guianensis* p. 16, *brasiliensis* p. 17, **spp. n.** PIC Mél. **24.**

Phloeotrya vide *Serropalpimorpha.*

Physciomorphus **gen. n.** near *Physcius*, *atricolor* **sp. n.** Guiana, PIC p. 16 Mél. **22.**

Physcius pallidipes **sp. n.** Brazil p. 16, PIC Mél. **22.**

Scraptia libanica **sp. n.** p. 2, PIC Echange **33.**—*S. donckieri* p. 72, *tananarivana*, *apicicornis*, p. 73, **spp. n.**, Madagascar, PIC Bull. Soc. Ent. France **1917.**—*S. atricollis*, *submaculata*, **spp. n.** Madagascar, p. 19, PIC Mél. **23.**—*S. gymnosterna* Queensland, *angusta* Tasmania and Victoria, *telephoroides* Victoria and New South Wales, *lugubris* Western Australia, South Australia and Victoria, *decipiens* South Australia, **spp. n.**, *angusta fasciata* **var. n.**, LEA Trans. R. Soc. S. Aust. **41** p. 163-167.—*S. oculata* **sp. n.** Arizona p. 358, SCHAEFFER Canad. Ent. **49.**

Serropalpimorpha **subg. n.** of *Phloeotrya* for *P. gounellei* Ch., PIC p. 150 Bull. Soc. Ent. France **1917.**

Serropalpolycus **gen. n.** near *Dircaea*, *diversipes* **sp. n.** Guiana, PIC p. 16 Mél. **22.**

Stictodrya **gen. n.** near *Thysias* p. 165, *longipennis* **sp. n.** Seychelles p. 166 pl. vi.f. 3, CHAMPION Ann. Nat. Hist. **19.**

Synchroa Newm. = (*Synchroina* Fairm.), PIC p. 150 Bull. Soc. Ent. France **1917.**—*S. malaccana* p. 14 with var. *semirufa*, *submetallica* Andaman Islds. p. 15, **spp. n.**, PIC Mél. **22.**

Trichosalpingus variabilis **sp. n.** Eastern Australia, LEA Trans. R. Soc. S. Aust. **41** p. 169.

LAGRIIDAE.

Chlorophila ingeniculata China p. 15 **sp. n.** *viridissima* **varr. n.** *bicoloripes*, *obscuripes* p. 16. PIC Mél. **26.**

Colparthrum bicinctum p. 133 pl. ii f. 1, *reedi* p. 134, *flavosellatum* p. 135, *nautense*, *nigricauda*, p. 136, *tuberculicauda* p. 137, *trifoveatum*, *laevicauda*, p. 138, *boliviense*, *setiventris*, p. 139, *spinicauda* p. 140, *subsignatu.* p. 141 f. 3, **spp. n.** Amer. mer., CHAMPION Ent. Mo. Mag. **53.**—*C. venezuelense* p. 18, *tijucanum*, *semiaenescens*, *magniceps*, p. 19, **spp. n.**, Amer. mer. *bifoveifrons* **var. n.** *fenestratum*, *ruficeps* **var. n.** *latenigrum*, p. 18, *reedi* **var. n.** *bahiense* p. 19, PIC Mél. **25.**

Disema macroptera p. 143, *xanthostigma* p. 144, *olivacea* p. 145, *plicatilis* p. 146, pl. ii f. 6, *fraterna*, *macrostigma* p. 147, *sinuatipes* p. 148 f. 5, *appendiculata* p. 149 f. 8, *obscura* p. 150 f. 9, *tortimanus* p. 151, *subarmata* p. 152, *melanostigma* p. 153, *inermipes* p. 154, *ochreostigma* p. 188, *cisteloides* p. 189, *sulcicollis*, *obliterata*, p. 190, **spp. n.** Amer. mer., CHAMPION Ent. Mo. Mag. **53.**—*D. championi* (= *brasilensis* Ch.), *amazonica*, p. 16, *luteipes*, *latithorax*, *semiviridescens*, p. 17, *cumanensis* p. 18, **spp. n.**, Amer. mer., *serraticornis* **var. n.** *luteofemoralis* p. 17, PIC Mél. **25.**

Disemorpha **gen. n.**, *ciliata* **sp. n.**, Brazil, PIC p. 16 Mél. **25.**

Falsonemostira **gen. n.** for *N. annulipes* P., PIC p. 14 Mél. **22.**

Lagria pulchrivaria, *decipiens*, Queensland and New South Wales, *erythroptera*, *tenuicollis*, Queensland, **spp. n.**, LEA Trans. R. Soc. S. Aust. **41** p. 175–178.

Meniscophorus opacipennis, *signifer* **spp. n.**, Amer. mer. p. 191, CHAMPION Ent. Mo. Mag. **53.**

Nemostira elongatior, *laosensis*, *vitalisi* with var. *rufithorax*, Indo-China, *atrosuturalis*, p. 11, *tananarivana*, Madagascar, *mocquerysi*, *gabonica*, p. 12, *benitensis*, Gaboon, *semiobecura*, *rouyeri*, Sumatra, *plicatipennis* Borneo, p. 13, *insularis* Banguey p. 14, **spp. n.**, PIC Mél. **22.**—*N. lucidicollis* **sp. n.** Gaboon p. 21, PIC Mél. **25.**

Nemostiromorpha **gen. n.**, *Microdisema* gen. n., *Modiodisema*, gen. n., PIC Echange No. 383 hors texte pp. 2 & 3.

Pseudolagria **gen. n.** p. 218, *mutabilis* p. 219 pl. ii f. 14, *diversa*, *flavifrons*, p. 220, *flavomarginata* p. 221, *lycoidas* p. 222 f. 15, **spp. n.** Amer. mer., CHAMPION Ent. Mo. Mag., **53.**—*P. atra*, *foveithorax*, *latipennis*, **spp. n.**, Brazil p. 15, PIC Mél. **26.**

Sphragidophorus subaenescens **sp. n.** Brazil p. 18 (and p. 1 of fasc. **26** where however it is called *Sphingidophorus*), PIC Mél. **25.**

Statira flavosignata p. 175 pl. xii f. 2, *spinigera* p. 176, *acanthomera* p. 177, *dentigera* p. 178, *longiceps* p. 180 f. 6, *verrucosus* p. 181, *mucronata* p. 182, *nigrocaerulea*, *batesi*, p. 183, *cuspidata* p. 184, *sanctaremae* p. 186, *asymmetrica* p. 190, *tortipes* p. 191, *simplicipes* p. 194, *formosa* p. 196, *viriditincta*, *peruana* p. 198, *sphenodera* f. 16, *stenocephala* p. 200, *viridinitens* p. 201, *scintillans*, *sphenoptera*, p. 203, *chalcoptera*, *cavernosa*, p. 205, *cupreoviridis*, *vigintipunctata*, p. 207, *semicuprea* p. 208, *rotundicollis* p. 209, *divisa*, *diluta*, p. 210, *puncticeps* p. 212, *dejeani*, *translucida*, p. 214, *subglabrata* p. 215, *caliensis*, *caeruleotincta*, p. 216, *puncticollis* p. 217, *chloroptera*, *canaliculata*, p. 218, *caracana* p. 219, *versicolor* p. 220, *sericea* p. 221, *umbrosa* p. 222, *eurydera* f. 17, *latevittata*, p. 223, *viridivittata* p. 224, *suffusa*, *aureomarginata*, p. 226, *trachydera* p. 227, *scabricollis*, *convexiuscula*, p. 228, *insularis* p. 229, *octolineata* p. 231, *tenuis*, *stenodera*, p. 233, *egaensis* p. 234, *distigma* p. 235, *cyanoptera* p. 236, *casnonioides* p. 237 f. 21, *campanulata*, *dromioides*, p. 238, *stenoptera*, *quadrisignata*, p. 239, *viridicincta* p. 241, *connexa* pl. xiii f. 23, *viridifasciata*, p. 242, *elegantula* f. 24 p. 243, *calophaenoides*, *segregata*, p. 244, *seminigra* f. 25, *trisellata* f. 26, p. 245, *paraensis* p. 246, *circumducta*, *subfenestrata*, p. 247, *incisicollis* p. 249, *xanthodera* p. 250, *quadriplagiata* p. 252 f. 32, *bifurcata* p. 253, *tenuipes* p. 254, *cayennensis*, *semiviolacea*, p. 258, *cribriceps* p. 259, *melanoptera* p. 260, *filicornis* p. 261, *perforata* p. 262, *pilosa* p. 263 f. 34, *strongylioides* p. 264, *haemonioides* p. 265 f. 35, all from Amer. mer., *cruciata* Nicaragua p. 364, *haitiensis* p. 265, all **spp. n.**, CHAMPION Tr. ent. Soc. Lond. **1917.**—*S. tuberculatipennis*, *semiviridis*, *subtuberculata*, *viridipennis*, **spp. n.**, Brazil, PIC p. 16 Echange **33.**—*S. semilineata*, *bogotensis*, *paranana*, *diversepunctata*, **spp. n.**, Amer. mer., *validicornis* var. n. *castaneithorax*, PIC Echange No. 383 hors texte p. 4.—*S. subcylindrica*, *minasensis*, *annulicornis*, *mendesensis*, *viridilineata*, p. 20, *caerulea* p. 21, **spp. n.**, Amer. mer., PIC Mél. **25.**—*S. atripes*, *bifoveolata*, *testaceicolor*, *semiopaca*, p. 16, *semiatra*, *duhanti*, *alutaceicollis*, *bernardana*, *bilineaticollis*, *subcatenata*, p. 17, *discoidalis*, *pilicornis*, *caracaensis*, p. 18, **spp. n.**, Amer. mer. PIC Mél. **26.**

Uroplatopsis ochreofasciata **sp. n.** Ecuador p. 193 pl. ii f. 12, CHAMPION Ent. Mo. Mag. **53.**

ANTHICIDAE, PEDILIDAE, HYLOPHILIDAE.

Anthicus longiterminalis p. 8, *subnotatipennis*, *majunganus*, *longipygus* with var. *breviterminalis*, *circumflexus*, p. 9, Madagascar, *A.* (*Acanthinus*) *pallidioripes* Brazil, *A.* (*Aulacoderus*) *sulcatulus* Africa p. 10, **spp. n.**, PIC Mél. **22.**—*A. semipunctatus*, *xerophilus*, **spp. n.** Austrlia, LEA Trans. R. Soc. S. Aust. **41** p. 580–581.

Eurygenius fragilicornis p. 174 pl. vi f. 5, *convexicollis* p. 175, **spp. n.**, seychelles, CHAMPION Ann. Nat. Hist. **19.**

†*Eurygenius wickhami* **sp. n.** Burma, COCKERELL p. 324 fig. Ann. Amer. ent. Soc. **10.**

Hylophilus monstrosipes var. n. *semibrunnescens*, *curtipennis* var. n. *tauricus* p. 3, PIC Echange **33.**

Incollogenius humeralis **sp. n.** Madagascar p. 10, PIC Mél. **22.**

Leptaleus prolongatipygus **sp. n.** Madagascar p. 8, PIC Mél. **22.**

Macrotrotomma **subg. n.** for *Trotomma antennata* P., PIC p. 3 Echange **33.**

Trichananca pisoniae Queensland, *nigripennis* Northern Territory, **spp. n.**, LEA Trans. R. Soc. S. Aust. **41** p. 178–179.

Trotomma impressicollis Cephalonia, *vaulogeri* Tunis, **spp. n.**, p. 3, *pubescens* var. n. *tunisea* p. 5, PIC Echange **33.**

Xylophilus torticornis p. 176, *clavicornis* p. 177, *seychellarum* p. 178, **spp. n.**, Seychelles, figs., CHAMPION Ann. Nat. hist. **19.**—*X. octomaculatus* p. 1, *flavescens* p. 2, *sexfasciatus*, Australia, *gracilipes* India, p. 3, *latimanus* Borneo p. 4, **spp. n.**, CHAMPION Ent. Mo. Mag. **53.**—*X. abundans*, *pilosicornis*, *glaber*, Lord Howe Island, *norfolcensis* Norfolk Island, *pachymerus*, *rufohumeralis*, *poecilopterus*, *microps*, *cnemopachys*, *decipiens*, *fusciventris*, *trichomerus*, Queensland, *mediofasciatus* New South Wales, *interioris*, *rufobrunneus*, South Australia, *acaciae* Tasmania, New South Wales and Queensland, *conspicillatus* Lord Howe Island and New South Wales, *leucostictus*, *synopticus*, *parentheticus*, *obliquifasciatus*, *dolichoderes*, *anthiciceps*, *divisus*, *nigriclavus*, *laterofuscus*, Northern Queensland, *discoater*, *flavicollis*, *flavocastaneus*, *brachyderes*, **spp. n.**, p. 185–209, *X.* (*Syzeton*) *lateralis* Blackb. nom. mut. to *X. interruptus*, p. 185, *X.* (*Syzetonellus*) *humeralis* Lea nom. mut. to *X. incisus*, p. 185, LEA Adelaide S. Aust. Trans. R. Soc. **41.**

MORDELLIDAE.

Dellamora **gen. n.** p. 284, *palposa* **sp. n.** Tunis p. 285, NORMAND Bull. Soc. ent. France **1916.**

Glipa favareli Gaboon, *rufotincta* Madagascar p 21, *batjanensis*, *borneensis*, *baeri* Manila, p. 22, **spp. n.**, PIC Mel. **25.**—*G. balabacana*, *gounellei* Brazil, *subsinuata* Guiana, *testaceicoxis* Java, p. 12, *rufonotata* Sumatra p. 13, **spp. n.**, *malaccana* var. n. *semirecta* p. 12, PIC Mél. **26.**

Mordella peregrinator p. 179, *disparilis* p. 180, **spp. n.**, Seychelles CHAMPION Ann. Nat. hist. **19.**—*M. madagascariensis* **sp. n.** p. 22, PIC Mél. **25.**—*M. aureofasciata*, *multiatronotata*, Brazil, *sinensis* Yunnan, *rufosuturalis* Madagascar, p. 13, **spp. n.**, PIC Mél. **26.**—*M. conspecta*, *auronotata*, *iridea*, *metasternalis*, *alphabetica*, *notatipennis*, *calopasa*, *caloptera*, *blanda*, *corvina*, Queensland, *chrysophora*, *vitticollis*, *quadrimaculata*, *obliquirufa*, *calodema*, New South Wales, *norfolcensis* Norfolk Island, *adipata* Victoria, *sericans* South Australia, *tarsalis* Western Australia, *pygidialis* Queensland and New South Wales, **spp. n.**, *sydneyana cairnsensis* Queensland, *verticordae niveosuturalis* Western Australia, varr. n., LEA Trans. R. Soc. S. Aust. **41** p. 228–243 pls. 14–15.

Mordellistena degressa, *partilis* p. 183, *coleae* p. 184, *septemcarinata* p. 185, *disempta*, *argutula* p. 186, **spp. n.**, Seychelles, CHAMPION Ann. Nat. Hist. **19.**—*M. diegosa* p. 22, *rufomaculata*, *madecassa*, Madagascar, *atroapicalis* Gaboon, p. 23, **spp. n.**, PIC Mél. **25.**—*M. atrolateralis* with var. *subobliterata*, *immaculaticeps*, *testaceicolor*, Madagascar, *brunneocephala* Tonkin, *malaccana*, p. 14, *dohertyi* p. 15, Malacca, **spp. n.**, PIC Mél. **26.**—*M. tibialis* Australia, *fuscula* Lord Howe Island, *abaceta*, *atronitens*, *trichura*, *castigata*, *concinna*, *coelioxys*, Queensland and New South Wales, *multilineata* New South Wales,

melvillensis, pulcherrima, Northern Territory, **spp. n.,** LEA Trans. R. Soc. S. Aust. **41** p. 248-253 pl. 15 fig. 118.—*M. rutila, exilis,* p. 10, *rufa, insolita, vera,* p. 11, *pulchra, wolcotti,* p. 12, *gigas* p. 13, **spp. n.,** U.S., LILJEBLAD Canad. Ent. **49.**

Tomoxia melasoma, melanura, Queensland, *howensis* Lord Howe Island. *exoleta* North-western Australia, **spp. n,,** LEA Trans. R. Soc. S. Aust. **41** p. 244–245.

RHIPIDOPHORIDAE.

Emenadia nigroapicalis Western and South Australis, *rufofasciata* Australia, *laeviceps, crassipes, setipennis,* Queensland, **spp. n.,** LEA Trans. R. Soc. S. Aust. **41** p. 258–262.

Euctenia megalops Western Australia, *fusca* Queensland, **spp. n.,** LEA Trans. R. Soc. S. Aust. **41** p. 265–267.

†*Myodites burmiticus* **sp. n.** in amber, COCKERELL p. 22 Ann. ent. Soc. Amer. **2.**

Pelecotomoides nigrolateralis, hackeri, **spp. n.** Queensland, LEA Trans. R. Soc. S. Aust. **41** p. 268–269.

Rhipidius mollipes **sp. n.** Queensland, LEA p. 253 T.c.—*R. amori* **sp. n.** Cordoba p. 249 fig., BOLIVAR Bol. Soc. espan. **17.**

MELOIDAE OR CANTHARIDAE.

Larvae, their claws, term triongulin, CROS pp. 159–164 figs. Ann. Soc. ent. France **86.**

Catalogue of *Meloidae* and *Cephaloidae,* Berlin (Junk) pars **69,** 208 pp.

Diaphorocera sicardi **sp. n.** Marocco p. 364, BEDEL Bull. Soc. ent. Fr. **1917,** 1918.

Epicauta ruficeps, Biologisches, ROEPKE Tyds. Ent. **50** p. 259.

Mylabris hermannioides with var. *lamborni* p. cviii, *farquharsoni* with var. *ibadanensis* p. cix, **spp. n.** Nigeria pl. B, BLAIR Pr. ent. Soc. Lond. **1916.**—*M. pustulata,* Biologisches, ROEPKE Tyds. Ent. **60** p. 252.

Nephrites nitidus Sh. = (*Sitarida minor* Ch.), taxonomy, BLAIR p. 122 Ent. Mag. **53.**

Sitarobrachys alfierii, male PIC p. 119 Bull. Soc. ent. Egypte **7.**

Zonitis longiceps Northern Territory, *breviceps* Queensland, **spp. n.,** LEA Trans. R. Soc. S. Aust. **41** p. 269–271.

OEDEMERIDAE.

Study of trophi of *Nacerdes,* BUGNION pp. 327–336 figs. Ann. Soc. ent. France **85.**

Ananca aldabrana p. 170, *scabripennis* Seychelles (= *andrewsi* part Arrow) p. 171 fig., *submarginata* Aldabra p 173, **spp. n.,** CHAMPION Ann. Nat. hist. **19.**

Copidita maritima, mira, Australia, *fuscicollis* South Australia, *interocularis* Lord Howe Island, *oblongicollis, erythroderes,* Western Australia, *appendiculata* New South Wales, *interrupta, apicifusca,* Queensland, *illota* Northern Territory, **spp. n.,** LEA Trans. R. Soc. S. Aust. **41** p. 299–308 pl. 13 fig. 53–54.

Dohrnia bifoveicollis **sp. n.** Queensland and New South Wales, LEA p. 294 T.c.

Megalocera rubricollis Hope, CHAMPION p. 7 Ent. Mo. Mag. **53.**

Microtonus asiaticus **sp. n.** India p. 14, PIC Mél. **22.**

Morpholycus **gen. n.** near *Pseudolycus, serraticornis* Queensland, *costipennis* Queensland and New South Wales, *monilicornis* New South Wales and Victoria, **spp. n.,** LEA Trans. R. Soc. S. Aust. **41** p. 287–291.

Oxacis concaviceps Australia, *majorina, caloptera,* North-Western Australia, *apicicollis, vittipennis,* Queensland, *picticeps* South Australia, **spp. n.,** LEA p. 309–314 pl. 13 fig. 28–29 T.c.—*O. grisescens* Fairm. (as *Ananca*) male characters fig. p. 169, CHAMPION Ann. Nat. Hist. **19.**

Pseudolycus haemorrhoidalis costipennis var. n. Tasmania, *carteri, canaliculatus,* New South Wales, *niger* Queensland, **spp. n.,** LEA Trans. R. Soc. S. Aust. **41** p. 278–287.

Sessinia brookesi **sp. n.** New Zealand p. 397, BROUN Bull. N.Z. Inst. **1.**

Techmessa bifoveicollis **sp. n.** Queensland, LEA Trans. R. Soc. S. Aust. **41** p. 292.

PYTHIDAE.

Neosalpingus serraticollis Australia, *obscuripennis* Tasmania and South Australia, *trifoveicollis* Victoria and Tasmania, **spp. n.**, LEA p. 159–162 T.c.

Notosalpingus variabilis, metallicus, montanus, **spp. n.**, Lord Howe Island, LEA p. 157–159 T.c.

CURCULIONIDAE.

Table of families of *Rhynchophora*, BRADLEY p. 84 J. N. York ent. Soc. **25.**

PIERCE Proc. U.S. Nat. Mus. **51** proposes the following new names: Superfamilies *Attelaboidea, Doydirhynchoidea, Brachyceroidea*, p. 463; Families *Psalidiidae* p. 464, *Orobitidae* p. 469, *Cryptorhynchidae* p. 472; Sub-families *Carcilliinae* p. 465, *Orobitinae* p. 469, *Orchestinae* p. 467, *Eurhininae* p. 472, *Rhininae* p. 465; Tribe *Loncophorini* p. 467.

Abagous **gen. n.** type *B. lutulentus* Gyll. p. 29, *rudis* **sp. n.** Britain p. 31, SHARP Ent. Mo. Mag. **53.**

Abantiades gratulus **sp. n.** New Zealand p. 428, BROUN Bull. N.Z. Inst. **1.**

Abrotheus **gen. n.** near *Pachyprypnus* p. 423, *placitus* **sp. n.** New Zealand p. 424, BROUN T.c.

Acalles sternalis p. 452, *nodigerus* p. 453, *zenomorphus* p. 454, *dentigerus* p. 455, **spp. n.** New Zealand, BROUN T.c.

Acypotheus orchivora pl. v f. 3 p. 26, WEISS Ent. News **28.**

Aleides willcocksi **sp. n.** Egypt p. 49, PIC Bull. Soc. ent. Egypte **6** 1914.—*A. theobromae* **sp. n.** Congo p. 115 fig., MARSHALL Bull. Ent. Res. **8.**—*A. tenuistria* = *incomptus* Marsh., Marshall p. 541 Brit. Orn. exp. New Guinea **1.**

Allaorops **gen. n.** near *Allaorus*, *carinatus* **sp. n.** New Zealand, BROUN p. 430 Bull. N.Z. Inst. **1.**

Allaorus impressus **sp. n.** New Zealand p. 455, BROUN T.c.

Amalorrhynchus melanarius, correction, HANSEN p. 357 Ent. Meddel. **11.**

Amisallus tuberculifrons p. 731, *basipennis* p. 732, **spp. n.** Australia, LEA P. Linn. Soc. N.S.W. **41.**

Anthonomus bituberculatus, valid, p. 357, HANSEN Ent. Meddel. **11.**

Apion; Notes on habits and synonymy, 23 spp. of France, PLANET pp. 149–158 Ann. Soc. ent. France **86.**—*A. variegatum*, stations, NICOD and BEDEL p. 310 Bull. Soc. ent. France **1916.**

Arachnopus fimbriatus = (*biplagiatus* Marsh.), MARSHALL p. 541 Brit. O.U. exp. New Guinea **1.**

Artapocyrtus sexmaculatus **sp. n.** Philippines p. 256 pl. f. 11, SCHULTZE Philipp. J. Sci. D. **12.**

Bagoini; classification, SHARP p. 100 Ent. Mo. Mag. **53.**

Bagous tomlini, arduus, **spp. n.** England p. 105, SHARP T.c.—*B. brevitarsis* **sp. n.** Denmark p. 351, HANSEN Ent. Meddel. **11.**—*B. frit, brevis, zwalinae*, notes, HANSEN p. 356 T.c.

Bantiades morosus p. 426, *cylindricus* p. 427, *notatus* p. 428, **spp. n.** New Zealand, BROUN Bull. N.Z. Inst. **1.**

Baris erysimi **sp. n.** France p. 209, CHOBAUT Bull. Soc. ent. France **1917.**

†*Baris primalis* **sp. n.** Florissant miocene p. 471 pl. xxxix figs. 6 and 7, WICKHAM P. U.S. nat. Mus. **52.**

Belus semipunctatus poverus var. n.; *interruptus* Queensland, *mimicus, multimaculatus, podagrosus, variabilis, halmaturinus, lacustris, orthodoxus*, South Australia, *exilis, acutipennis*, New South Wales, *angustatus, floccosus, villosus*, South and Western Australia, *cylindricus, trilinealbus*, Western Australia, **spp. n.**, LEA Trans. R. Soc. S. Aust. **41** p. 597–615.

Brachyolus bicostatus p. 416, *terricola* p. 417, **spp. n.**, New Zealand, BROUN Bull. N.Z. Inst. **1.**

Bryodrassus **gen.** n. *Otiorhynchidae*, *miricollis* **sp. n.** New Zealand, BROUN T.c.

Catasarcus spinipennis var. n. *insignis*, LEA p. 721 P. Linn. Soc. N.S.W. **41.**

Catoptes subplicatus p. 412, *dehiscens* p. 413, *robustus* p. 414, *albosparsus, pallidipes*, p. 415, *flaviventris, nigricans*, p. 416, **spp. n.**, New Zealand, BROUN Bull. N.Z. Inst. **1.**

Cecyropa sulcifrons p. 398, *striatella* p. 399, *jucunda*, *laticollis*, p. 400, **spp. n.**, New Zealand, BROUN T.c.

Ceuthorrhynchidius cakilis **sp. n.** Denmark p. 355, HANSEN Ent. Meddel **11.**

Ceuthorrhynchus lycoctoni **sp. n.** France p. 232, HUSTACHE Bull. Soc. ent. France **1916.**—*C. albonebulosus* **sp. n.** Denmark p. 352, HANSEN Ent. Meddel. **11.**—*C. echinatus* p. 386, *invisus*, *omissus*, p. 388, *moznettei* p. 389, *convexipennis* p. 390, **spp. n.**, U.S., FALL Canad. Ent. **49.**—*C. marginatus*, natural history, Hyslop p. 278 figs. J. econ. Ent. **10.**

Cholus cattleyarum **sp. n.** Washington (from S. America), BARBER p. 178 pl. xiii. P. ent. Soc. Washington **18.**—*C. cattleyae* pl. v f. 2 p. 28, WEISS Ent. News **28.**

Clypeorhynchus clarulus, *merus*, p. 431, *setosus* p. 432, *nitidellus*, *halli*, p. 433, **spp. n.**, New Zealand, BROUN Bull. N.Z. Inst. **1.**

Coeliodes ruber, natural history, SILVESTRI pp. 155–174 Bull. Lab. Portici **12.**

Conotrachelus biscayensis p. 385, *obesus* p. 386, **spp. n.**, U.S., FALL Canad. Ent. **49.**

Crisius posticalis **sp. n.** New Zealand p. 450, BROUN Bull. N.Z. Inst. **1.**

Cryptorhynchus harrisoni **sp. n.** England p. 93, POOL P.Z.S. Lond. **1917.**

Dermotrichus multicristatus p. 434, *elegantalis* p. 435, **spp. n.**, New Zealand, BROUN Bull. N.Z. Inst **1.**

Diastethus bromeliarum **sp. n.** Costa Rica p. 223, CHAMPION Ent. Mo. Mag. **53.**

Dichotychius cupulifer var. n. *niveolineatus*, PIC p. 10 Echange **33.**

Diorymeilus laevimargo pl. v. f. 4 p. 27, WEISS Ent. News **28.**

Ectopsis foveigerus **sp. n.** New Zealand, p. 448, BROUN Bull. N.Z. Inst. **1.**

Eisonyx (*Eumononycha*) *picipes* **sp. n.** Tennessee p. 472, PIERCE Proc. U.S. Nat. Mus. **51**, 1916.

Epacticus whitei South Australia, *occidentalis* Western Australia, *bimaculatus* South and Western Australia, **spp. n.**, LEA Trans R. Soc. S. Aust. **41**, pp. 594–596.

Epitimetes cupreus, *foveiger*, **spp. n.**, New Zealand, BROUN p. 406 Bull. N.Z. Inst. **1.**

Erirhinus celmisiae **sp. n.** New Zealand p. 444, BROUN T.c.

Essolithna jonesi **sp. n.** South Australia, LEA Trans. R. Soc. S. Aust. **41** p. 590.

Eucactophagus graphipterus, WEISS pl. v f. 1 p. 25 Ent. News **28.**

Eugnomus bryobius, *alternans*, p. 445, *tristis* p. 446, **spp. n.**, New Zealand, BROUN Bull. N.Z. Inst. **1.**

Eupachyrrhynchus hieroglyphicus **sp. n.** Luzon p. 254 pl. f. 4, SCHULTZE Philipp. J. Sci. D **12.**

Exomias pellucidus, food-plant, TOMLIN p. 234 Ent. Mo. Mag. **53.**

Exophthalmodes **nom. n.** for *Exophthalmus* Schönherr, tpye *opulentus* (Boheman) p. 465, PIERCE Proc. U.S. Nat. Mus. **51.**

Getacalles baccatellus p. 449, *foveiceps* p. 450, **spp. n.**, New Zealand, BROUN Bull. N.Z. Inst. **1.**

Gymnetron hispidum, HUSTACHE p. 281 Bull Soc. ent. France **1917.**

Halliella **gen. n.** p. 424 near *Styphlotelus*, *squamipes*, *antennalis*, p. 425, *longicollis* p. 426, **spp. n.**, New Zealand, BROUN Bull. N.Z. Inst. **1.**

Homoeonychus viduatus **sp. n.** Madagascar p. 199, *ornatus* var. n. *crux* p. 201, HUSTACHE Ann. Soc. ent. France **86.**

Inophloeus fuscatus, *collinus*, **spp. n.**, New Zealand, p. 419, BROUN Bull. N.Z. Inst. **1.**

Inososgenes **gen. n.** near *Sosgenes*, *longiventris* **sp. n.** New Zealand, BROUN p. 439 T.c.

Leiomerus granicollis **sp. n.** Brazil p. 469 ff. 1 2, PIERCE Proc. U.S. Nat. Mus. **51**, 1916.

Leptops fumatus p. 722, *mucidus* p. 723, *graniventris* p. 724, *intricatus* p. 725, *murinus* p. 726, *scaber* p. 727, *concinnus* p. 728, *minor* p. 729, **spp. n.**, Australia, LEA P. Linn. Soc. N.S.W. **41.**

Lithocia ciligera p. 420, *setirostris*, *basalis*, p. 421, *rectisetosa* p. 422, *nigricrista* p. 423, **spp. n.**, New Zealand, BROUN Bull. N.Z. Inst. **1.**

Lyperobius axiphyllae p. 442, *fallax*, *spedenii*, p. 443, **spp. n.**, New Zealand, BROUN T.c.

Macrocyrtus (?) *benguetanus* pl. f. 8 **sp. n.** with var. *montanus* f. 9 Philippines p. 255, SCHULTZE Philipp. J. Sci. D. **12.**

Mandalotus microscopicus p. 735, *magnicollis* p. 736, **spp. n.** Australia, LEA P. Linn. Soc. N. S. W. **41.**

Mecysmoderes memecylonis p. 395, *verrucosus* p. 397, *metasternalis* p. 398, *subhumeralis* p. 400, *pusio* p. 401, *pectinipes* p. 402, *tenuirostris* p. 403, **spp. n.** India and Burma, MARSHALL Ann. Nat. Hist. **19.**

Meionops **gen. n.** *Eremninae* p. 191, *aspersus*, *glaucinus*, **spp. n.** India p. 192, MARSHALL T.c.

Metrioderus brevirostris p. 258, *acuminatus* p. 259, *rhomboidalis* p. 260, **spp. n.**, Madagascar, HUSTACHE Ann. Soc. Ent. France **86.**

Metapocyrtus carinatus p. 257, *furcatus* f. 10 p. 258, **spp. n.** Luzon, SCHULTZE Philipp. J. Sci. D. **12.**

Misophrice arida **sp. n.** South Australia, LEA Trans. R. Soc. S. Aust. **41** p. 593.

Myllocerus quadricolor, *angustipennis*, *aberrans*, Northern Territory, *viridimicans*, *villosipennis*, *zopherus*, *ashi*, South Australia, *obliquifasciatus* Western Australia, **spp. n.**, LEA p. 583-588 T.c.

Nanophyes maculatus, jumping larva, ADAIR p. 83 Bull. Soc. Ent. Egypte **6.**

Nesotocus giffardi from *Cheirodendron*, SWEZEY Proc. Hawaiian Ent. Soc. **3** 1915 p. 57.

Nestrius sulcirostris p. 437, *prolixus* p. 438, **spp. n.** New Zealand, BROUN Bull. N. Z. Inst. **1.**

Nicaeana crassifrons, **sp. n.** New Zealand p. 398, BROUN T.c.

Nothapocyrtus luzonicus **sp. n.** Luzon p. 256 pl. f. 6, SCHULTZE Philipp. J. Sci. D. **12.**

Omophorus stomachosus = (*Metatypes turritus* Pasc.), *indispositus* Boh. = (M. *parvus* Faust), MARSHALL p. 195 Ann. Nat. Hist. **19.**

Onesorus hoplocnemus **sp. n.** Australia p. 730, LEA P. Linn. Soc. N.S.W. **41.**

Onychocnemis **gen. n.** *Anthonominae* p. 193, *careyae*, **sp. n.** Mysore p. 194, MARSHALL Ann. Nat. Hist. **19.**

Orchestes angustifrons **sp. n.** Denmark p. 24, WEST Ent. Meddel. **11**, 1916.

Oreocharis fasciata, *congruens*, **spp. n.**, New Zealand, BROUN p. 447 Bull. N. Z. Inst. **1.**

Otiorhynchus sulcatus, parthenogenetic, FEYTAUD C. R. Ac. Paris **165** p. 767. *O. ovatus*, in Brit. Columbia, TREHERNE pp. 257-260 Canad. Ent. **49.**—*O. caesipes*, HUSTACHE p. 280 Bull. Soc. Ent. France **1917.**

Oxyops alphabetica, *vacillans*, **spp. n.** South Australia, LEA Trans. R. Soc. S. Aust. **41** p. 591-592.

Pachyrrhynchus sumptuosus p. 250, *igorota* p. 251 pl. f. 2, *loheri* p. 252 f. 3, *schultzei* f. 7, *zebra* f. 8, p. 253, **spp. n.**, Philippines, SCHULTZE Philipp. J. Sci. D. **12.**

Pachyura quadrimaculata Victoria, *brevirostris* New South Wales, **spp. n.**, LEA Trans. R. Soc. S. Aust. **41** p. 615-617.

† *Pandeleteinus rudus* **sp. n.** Florissant miocene, p. 470 pl. xxxix. f. 4, WICKHAM P.U.S. nat. Mus. **52.**

Parabagous **gen. n.** type *B. frit* Gyll., SHARP p. 28 Ent. Mag. **53.**

Peltotrachelus **gen. n.** *Eremninae* p. 188 type *Platytrachelus pubes* Faust, *cognatus*, *rugipennis*, p. 189, India, *illobatus* Burma p. 190, *smaragdus* Madras p. 191, **spp. n.**, MARSHALL Ann. Nat. Hist. **19.**

Phaenomerus angulicollis p. 197, *brevirostris* p. 198, **spp. n.**, India, MARSHALL T.c.

Phrystanus tuberculatus **sp. n.** Madagascar p. 204, HUSTACHE Ann. Soc. Ent. France **86.**

Phygothalpus philpotti p. 435, *granissimus* p. 436, *sulcipennis* p. 437, **spp. n.**, New Zealand, BROUN Bull. N. Z. Inst. **1.**

Picia drurei **sp. n.** Mesopotamia, PIC p. 10 Echange **33.**

Platyomida dorsalis p. 407, *cuprealis* p. 408, *fuscella*, *rectirostris*, p. 409, *hystricula*, *sulcicollis*, p. 410, *latipennis* p. 411, **spp. n.**, New Zealand, BROUN Bull. N. Z. Inst. **1.**

Polyphrades raui **sp. n.** South Australia p. 589, *apicalis* p. 733, *cordatus*, Australia, *subterraneus* Tasmania, p. 734, **spp. n.**, LEA P. Linn. Soc. N.S.W. **41.**

Probagous **gen. n.** type *B. heasleri*, SHARP p. 100 Ent. Mag. **53.**

Protolobus nodosus **sp. n.** New Zealand, p. 412, BROUN Bull. N. Z. Inst. **1.**

Psalidium, table pp. 211–227; *undulatum* Syria p. 215, *reitteri* Asia Minor p. 220, *holdhausi* Taurus p. 224, *cilicicum* Millis p. 225, **spp. n.**, *sculpturatum* **varr. n.** *intermedium* and *parvosculptum* p. 225, FLEISCHER Wien. Ent. Zeit. **33.**

Pseudobagous **gen. n.**, *Pseudobagoini* trib. **n.** p. 27, *junodi* **sp. n.** Delagoa Bay p. 28, SHARP Ent. Mo. Mag. **53.**

Pycnodactylus tomentosus, ADAIR pp. 81-84 Bull. Soc. Ent. Egypte **7.**

Rachidiscodes **gen. n.** p. 429 near *Rachidiscus*, *altipennis* **sp. n.** New Zealand p. 430, BROUN Bull. N. Z. Inst. **1.**

Rhinoscapha darnleyensis **sp. n.** Australia, LEA p. 720 P. Linn. Soc. N.S.W. **41.**

Rhynchites, table of British, EDWARDS pp. 22-26 Ent. Mo. Mag. **53.**—*R.*, British, NEWBERY pp. 79 and 80 Ent. Mo. Mag. 53.—*R.*, British, notes, DONISTHORPE p. 85 T.c.—*R.*, *longiceps* = (*harwoodi* Joy), characters, HANSEN p. 358 Ent. Meddel. **11.**—*R. conicus*, oviposition, BORDAS C.R.Ac. Paris **165** pp. 70-73.

Rystheus notabilis **sp. n.** New Zealand, BROUN p. 441 Bull. N. Z. Inst. **1.**

Sciaphilus subannulipes, *curtipennis*, *submaculatus*, p. 14, *alboscutellaris* p. 22, **spp. n.**, Algeria, PIC Echange **33.**

Sosgenes discalis **sp. n.** New Zealand p. 440, BROUN Bull. N. Z. Inst. **1.**

Stigmatrachelus; revision, table, synonymy, pp. 204-256, with following new species, *unifasciatus* p. 223, *faucherei* p. 225, *nitidus* p. 227, *mandibularis* p. 229, *hovanus* p. 231, *bifasciatus* p. 232, *latirostris*, *umbrinus*, p. 234, *fairmairei* p. 236, *obsoletus* p. 237, *alluaudi* p. 238, *pilosulus* p. 240, *unicolor* p. 241, *mocquerysi* p. 242, *elegantulus* p. 243, *albopustulatus* p. 244, *fuscoruber* p. 245, *notatipennis* p. 246, *griseus* p. 247, *minutus* p. 248, *convexicollis*, *fulvicornis*, p. 249, *bimaculatus*, *albolineatus*, p. 251, *sitonoides* p. 253, *argenteus*, *globulus*, p. 254, **spp. n.**, Madagascar, HUSTACHE Ann. Soc. Ent. France **86.**

Systates ramosus p. 112 fig., *maynei* p. 114 fig., **spp. n.**, Africa, MARSHALL Bull. ent. Res. **8.**

Teluropus **gen. n.** *Omophorinae* p. 195, *ballardi* **sp. n.** Madras p. 196, MARSHALL Ann. Nat. Hist, **19.**

Tigones nasalis, *citimus*, p. 401, *thoracica* p. 402, *variata*, *murina*, p. 403, *assimilis*, *setosa*, p. 404, *longiceps*, p. 405, **spp. n.**, New Zealand, BROUN Bull. N.Z. Inst. **1.**

Tocris pascoi **sp. n.** New Zealand p. 442, BROUN T.c.

Tychanus lunalis **sp. n.** New Zealand p. 448, BROUN T.c.

Tychius peyerimhoffi p. 9, *henoni* p. 10, **spp. n.**, Algeria, *reichei* var. n. *moreanus*, *thoracicus* var. n. *dalmatinus*, *striatulus* var. n. *berytensis*, p. 9, PIC Echange **33.**

†*Tychius ferox* **sp. n.** Florissant miocene p. 471 pl. xxxix f. 5, WICKHAM P. U. S. Nat. Mus. **52.**

Xenacalles nigricans **sp. n.** New Zealand p. 451, BROUN Bull. N. Z. Inst. **1.**

Zeacalles speciosus **sp. n.** New Zealand p. 452, BROUN T.c.

SCOLYTIDAE.

Anisandrus populi **sp. n.** Quebec p. 22, SWAINE Bull. Dep. Agric. Ent. Canada **14.**

Carphoborus carri **sp. n.** Canada p. 16, SWAINE T.c.

Coccotrypes dactyliperda, WILLCOCKS p. 38 Bull. Soc. ent. Egypte **6** 1914.

†*Cryphalites* **gen. n.**, *rugosissimus* **sp. n.** Burmah amber, COCKERELL p. 368 fig. Amer. J. Sci. **44.**

Cryphalus amabilis p. 321, *grandis* p. 323, **spp. n.** Oregon, CHAMBERLIN Canad. Ent. **49.**

Crypturgus borealis p. 7, *corrugatus* p. 8, **spp. n.**, Amer. bor., SWAINE Bull. Dep. Agric. Ent. Canada **14.**

Diapus furtivus, life-history, BEESON Ind. Forest Rec. **6** p. 1–29, 2 pls.

Eccoptogaster tsugae, *monticolae*, **spp. n.**, Brit. Columbia p. 32, SWAINE Bull. Dep. Agric. Ent. Canada **14.**

Hylastes; biology, MUNRO P. R. Phys. Soc. Edinburgh **20** pp. 123–158 pls. vii–ix.

Hylastes scaber p. 18, *nitidus*, *asper*, p. 19, **spp. n.**, Amer. bor., SWAINE Bull. Dep. Agric. Ent. Canada **14.**

Hylurgops lecontei p. 16, *knausi*, *grandicollis*, p. 17, **spp. n.**, Amer. bor., SWAINE T.c.

Ips englemanni p. 30, *yohoensis*, *hunteri*, p. 31, **spp. n.**, Amer. bor., SWAINE T.c.

Leperisinus cinereus **sp. n.** Canada p. 15, SWAINE T.c.—*L. californicus*, figs., SWAINE p. 53 Bull. **283** Berkeley Agric. exp. Stat.

Orosiotes **gen. n.**, *kumatoensis* **sp. n.**, NIISHIMA Essays Nawa p. 1–4 pl.

Phloeosinus canadensis p. 8, *minutus*, *rugosus*, p. 9, *juniperi* p. 10, **spp. n.**, Canada, SWAINE Bull. Dep. Agric. Ent. Canada **14.**

Pityophthorus canadensis p. 24, *nitidus* p. 25, *rhois* p. 26, *lateralis*, *confertus*, p. 27, *granulatus*, *ramiperda*, p. 28, *intextus* p. 29, *nudus* p. 30, **spp. n.**, Amer. bor., SWAINE T.c.

Pseudocryphalus **gen. n.**, *brittaini* p. 20, *criddlei* p. 21, **spp. n.** Canada, SWAINE T.c. (pad.) 1917.

Pseudohylesinus **gen. n.** for part of *Hylesinus*, *tsugae*, p. 11, *sitchensis*, *nobilis*, p. 12, *grandis* p. 13, *obesus* p. 15, **spp. n.**, Canada, SWAINE T.c. (pad.) 1917.

Trypodendron borealis p. 21, *ponderosae* p. 22, **spp. n.** Canada, SWAINE T.c.

Xyleborus canadensis **sp. n.** p. 24, SWAINE T.c.—*X. dispar* pp. 97–105 ff. 1–6, *saxeseni* p. 107 f. 7, WILSON Agric. Exp. Sta. Oregon Rep. **1911–12** 1913 p. 97–107 ff. 1–7.

BRENTHIDAE.

Brentoidea superfam. n. p. 462, PIERCE Proc. U. S. Nat. Mus. **51.**

Anepsiotes **gen. n.** *Belopheridarum* p. 317, *schenklingi* **sp. n.** Ceylon p. 321, KLEINE Ent. Mitt. **6.**

Cyphagogus corporaali **sp. n.** Java, KLEINE Tydschr. Ent. **60** p. 177.

Kleinella compressicornis **sp. n.** Waigeoe, KLEINE Zool. Med. **3** 276.

Miolispa splendida p. 289, *crassifemoralis* p. 292, **spp. n.**, Neu-Guinea, KLEINE T.c.

Subdysmorphorhynchus **gen. n.** p. 323, *carinatus* **sp. n.** Queensland p. 326, figs., KLEINE T.c.

Suborychodes **gen. n.** p. 327, *intermedius* **sp. n.** Sumatra p. 330, figs., KLEINE Ent. Mitt. **6.**

Systellus **gen. n.** p. 175, *rex* **sp. n.** Borneo &c. p. 177, KLEINE T.c.

ANTHRIBIDAE.

Platystomoidea superfam. n. p. 463, PIERCE Proc. U. S. Nat. Mus. **51.**

AGLYCIDERIDAE.

Aglycyderoidea superfam. n. p. 462, PIERCE Proc. U. S. Nation Mus. **51.**

CERAMBYCIDAE.

Larval structures, HESS Ann. ent. Soc. Amer. **10** p. 63–74, 3 pls.

Musculature of larvae, CRAIGHEAD Proc. ent. Soc. Washington **18** pp. 129–146 4 pls.

Cerambycoidea superfam. n. p. 462, PIERCE Proc. U. S. Nat. Mus. **51.**

Numerous varr. n., pp. 3–10; PIC Mat. Long. **10** pt. 2.

Acronia pretiosa **sp. n.** Philippines, p. 249 pl. f. 1, SCHULTZE Philipp. J. Sci. D. **12.**

Ancita penicillata **sp. n.** Australia, AURIVILLIUS Ark. Zool. **10** No. 23 p. 29.

Anthophilax nigrolineatus **sp. n.** Oregon p. 36, VAN DYKE J. N. York Ent. Soc. **25.**—*Anthophilax;* synopsis of North-American, NICOLAY J. New York ent. Soc. **25** p. 38–44.

Aphanasium albopilosum **sp. n.** South Australia, LEA Trans. R. Soc. S. Aust. **41** p. 618 pl. xxxvi figs. 86–87.

Apriona submaculosa **sp. n.** Tonkin p. 7, Pic Mél. **24.**

Arrhenotus trapezicollis = (*T. laticollis* Gah.), Gahan p. 541 B. O. U. exp. New Guinea **1.**

Athemistus (*Hoplathemistus*) *conifer* p. 25 pl. iii fg. 1, *albofasciatus* p. 26, **spp. n.,** Queensland, Aurivillius Ark. Zool. **10** No. 23.

Bethelium x-scriptum **sp. n.** Queensland, Aurivillius p. 8 pl. ii fig. 7 T.c.

Bethelium munda and larva, Froggatt p. 566 pl. i figs. 3–5 Agric. Gaz. N.S.W. **1916.**

Brachaciptera **gen. n.** near *Mecynopus*, *tibialis*, *auricoma*, **spp. n.,** Queensland, Lea Trans. R. Soc. S. Aust. **41** pp. 317–319.

Brachyrhabdus **gen. n.,** *bifasciatus* **sp. n.** Queensland, Aurivillius Ark. Zool. **10** No. 23 p. 47 pl. i fig. 6.

Cacia albofasciata **sp. n.** Tonkin p. 7, Pic Mél. **23.**

Callidium cedri **sp. n.** Algeria p. 332, Peyerimhoff Bull. Soc. ent. France **1917** 1918.—*C. schotti* p. 184, *texanum* p. 185, **spp. n.,** U.S., *violaceum* = (*janthinum* Lec.) p. 185, Schaeffer J. N. York ent. Soc. **25.**

†*Callidium grandaevum* **sp. n.** Florissant miocene p. 469 pl. xxxviii figs. 4 & 5, Wickham P. U.S. Nat. Mus. **52.**

Casiphia and *Casiphioprionus*, Lameere p. 258 Bull. Soc. ent. France **1916.**

Ceresium seminigrum p. 11 pl. iii fig. 3, *mjoebergi* p. 11 pl. iii fig. 4, *affine* p. 12 pl. ii fig. 5, **spp. n.,** Australia, Aurivillius Ark. Zool. **10** No. 23.

Chlorophorus mjoebergi **sp. n.** Queensland, Aurivillius p. 19 pl. i fig. 1 T.c.

Closterus godeli **sp. n.** Madagascar p. 147, Lameere Bull. Soc. ent. France **1917.**

Clytus rufobasalis **sp. n.** Yunnan p. 353, Pic Bull. Soc. ent. France **1917** 1918.—*C. rufoapicalis* **sp. n.** Tibet p. 7, Pic Mél. **24.**

Coccothorax **gen. n.,** *quadrinodosus* **sp. n.** Queensland, Aurivillius Ark. Zool. **10** No. 23 p. 9 pl. ii fig. 3.

Coptocercus vittatus p. 5 pl. i fig. 2, *truncatus* p. 6 pl. ii fig. 1, *rugicollis* p. 7 pl. ii fig. 4, **spp. n.,** Queensland, Aurivillius T.c.

Cyrtillus **gen. n.,** p. 46, *albofasciatus* **sp. n.** Australia p. 47 pl. i fig. 6, Aurivillius T.c.

Didymocentrus **gen. n.,** *foveatus* **sp. n.** Queensland, Aurivillius p. 45 pl. i fig. 9 T.c.

Dorcadion divisum var. n. *smyrnense*, *femoratum* var. n. *subiacum*, Pic p. 10. Echange **33.**

Earinus bimaculatus Tasmania p. 743, *humeralis* Queensland p. 744, **spp. n.,** Lea P. Linn. Soc. N.S.W. **41.**

Eurypoda (*Neoprion*) *cordieri* **sp. n.** Cochinchine, Lameere p. 234 Bull. Soc. ent. France **1916.**

Exocentrus ortmansi **sp. n.** Congo p. 117, Gahan Bull. ent. Res. **8.**

Halme saccomanti **sp. n.** Laos p. 6, Pic Mél. **23.**

Haplorhabdus **gen. n.** near *Odontorhabdus*, *nymani* **sp. n.** New Guinea, Aurivillius Ark. Zool. **10** No. 23 p. 48.

Hathliodes (?) *molitorius* **sp. n.** Australia, Aurivillius p. 33 pl. iii fig. 7 T.c.

Hecyrida formosana **sp. n.** p. 7, Pic Mél. **26.**

Hystatoderes **gen. n.** near *Hystatus* p. 146, *vitalisi* **sp. n.** Tonkin p. 147, Lameere Bull. Soc. ent. France **1917.**

Leptura 7-punctata, varr. pp. 14–18, Pic Mat. Long. **10** pt. 2.—*L. rubra numidica* subsp. n. p. 331, Peyerimhoff Bull. Soc. ent. France **1917** 1918.—*L. 6-guttata* varr. n. *vastatorum* and *pyrenaica*, Pic p. 5 Echange **33.**

Macrotoma (*Pseudoplites* subg. n.) *inexspectata* **sp. n.** Queensland p. 233, Lameere Bull. Soc. ent. France **1916.** —*M. fisheri*, Lameere p. 257 T.c.

Merium proteus = (*bifossulatum* Cas.), Schaeffer p. 183 J. N. York ent. Soc. **25.**

Mesosa glabrofasciata **sp. n.** Yunnan p. 353, Pic Bull. soc. ent. France **1917** 1918.—*M. luteofasciata* Tonkin p. 11, *thibetana*, *nodosipennis* Yunnan, *langana* Tonkin p. 12, *taliana* China p. 13, **spp. n.,** Pic Mat. Long. **10** pt. 2.—*M. luteopubens* **sp. n.** Tonkin p. 7, Pic Mél. **23.**

Microtragus bifasciatus, basalis, **spp. n.,** Queensland, LEA Trans. R. Soc. S. Aust. **41** pp. 624–625.

Nathrius **gen. n.** p. 76 near *Thranius, porteri* **sp. n.** Santiago p. 77 fig., BRÈTHES Revist. chilena **20** 1916.

Neoclytus simplarius **sp. n.** Florida p. 240, BLATCHLEY Canad. Ent. **49.**

Neodorcadion laqueatum, varr. pp. 18–20, PIC Mat. Long. **10** pt. 2.—*N. balcanicum* var. n. *hadiense, segne* var. n. *credulum,* PIC p. 10 Echange **33.**

Oberea euphorbiae var. n. *histrionis, erythrocephala* var. n. *erivanica,* PIC p. 11 T.c.—*O. bisbinotaticollis* **sp. n.** Tonkin p. 13, PIC Mat. Long. **10** pt. 2.

Obriomorpha **gen. n.** p. 20, *triangulifera* **sp. n.** p. 21 pl. ii fig. 9 Queensland. AURIVILLIUS Ark. Zool. **10** No. 23.

Obrium brunneum, habitat, GALIBERT p. 183 Bull. Soc. ent. France **1917.**

Ocheutes fasciculatus **sp. n.** Tibet p. 7, PIC Mél. **26.**

Oricopis intercoxalis, setipennis, maculiventris, **spp. n.,** Queensland, LEA Trans. R. Soc. S. Austr. **41** pp. 314–317.

Orinoeme truncata p. 29 pl. ii fig. 11, *rubescens* p. 30 pl. ii fig. 10, **spp. n.,** Queensland, AURIVILLIUS Ark. Zool. **10** No. 23.

Pachyosa albonotata **sp. n.** Yunnan p. 354, PIC Bull. Soc. ent. France **1917** 1918.—*P. diversesparsa* **sp. n.** Yunnan p. 7, PIC Mél. **26.**

Paressisus **gen. n.** (*Essisini* tribus n.), *viridipennis* **sp. n.** Queensland, AURIVILLIUS Ark. Zool. **10** No. 23 p. 44 pl. i fig. 2.

Pissarthrius brevicornis **sp. n.** Australia, AURIVILLIUS p. 13 pl. i fig. 5 T.c.

Platyomopsis basalis p. 37 pl. iii fig. 9, *pallida* p. 37 pl. iii fig. 10, *ferruginea* p. 39 pl. i fig. 8, *cinerascens* p. 40, *mjoebergi* p. 41 pl. i fig. 7, **spp. n.,** Australia, AURIVILLIUS T.c.

Pogonochaerus cedri **sp. n.** Djurdjura p. 318, PEYERIMHOFF Bull. Soc. ent. France **1916.**—*P. hispidus* var. n. *rufescens,* PIC p. 6 Echange **33.**

(N–4840 j)

Prionus gahani ♀, *delavayi* and *potanini,* LAMEERE p. 257 Bull. Soc. ent. France **1916.**—*P. besicanus* et *lefebvrei,* LAMEERE p. 233 Bull. Soc. ent. France **1917.**

Prosoplus albidus **sp. n.** Australia, AURIVILLIUS Ark. Zool. **10** No. 23 p. 33 pl. iii fig. 8.

Pseudoechthistatus **gen. n.** p. 6, *obliquefasciatus* **sp. n.** China p. 7, PIC Mél. **26.**

Pseudoplites **subg. n.** vide *Macrotoma.*

Ptychodes trilineatus, natural history, HORTON J. Agric. Res. **11** pp. 371–382 3 pls.

Somatidia spectabilis p. 456, *flavidorsis, suffusa,* p. 457, *femoralis, oscillans,* p. 458, *obesula* p. 459, *laevinotata* p. 460, *parvula* p. 461, **spp. n.,** New Zealand, BROUN Bull. N.Z. Inst. **1.**

†*Spondylis tertiarius* **sp. n.** Florissant miocene p. 469 pl. xxxix figs. 2 & 3, WICKHAM P. U.S. Nat. Mus. **52.**

Stenoderes opacicollis **sp. n.** Queensland, AURIVILLIUS Ark. Zool. **10** No. 23 p. 16.

Strangalia emmipoda varr. n. *adanensis* and *tambei,* PIC p. 6 Echange **33.**

Strongylurus sexmaculatus **sp. n.** Queensland, AURIVILLIUS Ark. Zool. **10** No. 23 p. 15 pl. iii fig. 8.

Sybra poeciloptera **sp. n.** Queensland, AURIVILLIUS p. 43 pl. iii fig. 6 T.c.

Tessaromma nigroapicale **sp. n.** Queensland, AURIVILLIUS p. 13 pl. ii fig. 2 T.c.

Titanus (*Braderochus*) *retrospinosus* **sp. n.** Colombia p. 233, LAMEERE Bull. Soc. ent. France **1916.**

Tmesisternus latifascia = (*cinctus* Gah.), *elegans* = (*taeniatus* Gah.), GAHAN p. 541 B.O.U. exp. New Guinea **1.**

Tragocephala maynei **sp. n.** Congo p. 47, GAHAN Bull. ent. Res. **8.**

Trigonoptera gracilis **sp. n.** Queensland, AURIVILLIUS Ark. Zool. **10** No. 23 p. 31 pl. iii fig. 11.

Uracanthus glabrilineatus p. 737, *inermis* p. 738, Australia, *maleficus* Tasmania p. 739 fig., *ventralis* p. 741, *ater* p. 742, Australia, **spp. n.,** LEA P. Linn. Soc. N.S.W. **41.**

Zygrita diva var. *apicalis* var. n. Australia, AURIVILLIUS Ark. Zool. **10** No. 23 p. 42.

Xylotrechus atronotatus **sp. n.** Formosa with var. *subscalaris*, PIC Mat. Long. **10** pt. 2 p. 11.—*X. unicarinatus* **sp. n.** p. 20, PIC Mél. **22.**—*X. biarcuatus* China p. 6, *atrolineatus* India p. 7, **spp. n.**, PIC Mél. **24.**—*X. aceris* **sp. n.** Colombia p. 215, FISHER P. ent. Soc. Washington **18.**

BRUCHIDAE.

Mylabroidea superfam. n. p. 462, PIERCE Proc. U. S. Nat. Mus. **51.**

Acanthoscelides obtectus, natural history, RAZZAUTI pp. 94–122 Boll. Lab. Portici **12.**

Bruchus obtectus, early stages, MANTER pp. 190–192 J. econ. Ent. **10.**

†*Bruchus antaeus* **sp. n.** Florissant miocene p. 470 pl. xxxviii figs. 6 & 7, WICKHAM P. U.S. Nat. Mus. **52.**

Pygospermophagus **gen. n.**, *brevicornis* **sp. n.** Magelies Bergen, PIC p. 8 Mél. **26.**

Spermophagus madecassus, *tonkineus*, p. 8, *subaenescens* Java, *ceylonicus*, *aeneipennis*, Ceylon, *rufipennis* Cochin China, *formosanus* with var. *subundulatus* Formosa, p. 9, *negligens* Lombok with var. *andamensis*, *excavatus*, *sparsemaculatus*, Sumatra, *multiguttatus* Africa, p. 10, *multipunctatus* Senegal, *atromaculatus* Sumatra, *testaceiventris* Yunnan, *testaceicolor* Japan, p. 11, **spp. n.**, PIC Mél. **26.**—*S. testaceus* Argentina, *guyanensis*, p. 302, *simoni* Philippines p. 303, **spp. n.**, PIC Bull. Soc. ent. France **1917.**

CHRYSOMELIDAE.

Chrysomeloidea superfam. n. p. 462, PIERCE Proc. U. S. Nat. Mus. **51.**

Aesernia bimaculata **sp. n.** Neu Guinea WEISE Tyds. Ent. **60** p. 197.

Arsipoda nigripennis p. 212, *viridipennis* p. 213, *fulvitarsis* p. 214, **spp. n.**, Neu Guinea, WEISE T.c.

Agonia mira p. 412, *pygmaea* p. 414, *longula* p. 415, *rotundicollis* p. 417, *opacicollis* p. 418, *laevicollis* p. 419, *nana* p. 420, *attenuata* p. 422, **spp. n.**, Philippines, GESTRO Ann. Mus. Doria **47.**

Allastena eminens **sp. n.** New Zealand p. 468, BROUN Bull. N.Z. Inst. **1.**

Allocharis praestans, *subsulcata*, p. 462, *nigricollis*, *picticornis*, *media*, p. 463, *fuscipes*, *robusta*, p. 464, *tarsalis* p. 465, **spp. n.**, New Zealand, BROUN T.c.

Anisodera insularis **sp. n.** Philippines p. 393, GESTRO Ann. Mus. Doria **47.**

Aphthona moreli Pic, BUYSSON pp. 76–81 Bull. Soc. ent. Egypte **6**; *A. moreli*, etc., PIC p. 125 Bull. Soc. ent. Egypte **7.**

Aspidolopha kampeni **sp. n.** Neu Guinea, WEISE Tyds. Ent. **60** p. 193.

Botryonopa misella **sp. n.** Mindanao p. 392, GESTRO Ann. Mus. Doria **47.**

Bryobates rugidorsis **sp. n.** New Zealand p. 461, BROUN Bull. N.Z. Inst. **1.**

Caccomolpus nigristernis p. 467, *viridescens* p. 468, **spp. n.**, New Zealand, BROUN, T.c.

Callispa nigrovittata **sp. n.** Luzon p. 397, GESTRO Ann. Mus. Doria **47.**

Ceratia kampeni **sp. n.** Neu Guinea, WEISE Tyds. Ent. **60** p. 205.

Ceratotrix **gen. n.** near *Arcastes*, p. 210, *polita* **sp. n.** Neu Guinea p. 211, WEISE, T.c.

Chalcomela montivaga **sp. n.** Neu Guinea, WEISE, p. 199 T.c.

Chrysolampra marginicollis **sp. n.** Tonkin p. 307, BERLIOZ Ann. Soc. ent. France **86.**

Chrysomela aenea, natural history, KELLER Vierteljahrschr. Ges. Zurich **62** p. 103, pl.

Colaspoides chlorolaema **sp. n.** Laos p. 316, BERLIOZ Ann. Soc. ent. France **86.**

Colobapsis notatithorax var. n. *innotaticollis* p. 8, PIC Mél. **24.**

Corynodes iridescens **sp. n.** Laos p. 314, BERLIOZ Ann. Soc. ent. France **86.**

Cryptocephalus yunnanus, *pallidoapicalis*, Yunnan, *thibetanis*, *saigonensis*, p. 10, *robustissimus*, *elongaticornis*, *didyanus*, p. 11, *depressicornis*, *tananarivanus*, p. 12, Madagascar, **spp. n.**, *triangularis* varr. n. *postunifasciatus* and *bifurcatus*. p. 11, *discissus* var. n.

preapicalis p. 12, PIC Mél. **24**.—*C. renatus* 5 varr. n. p. 22, 10-*maculatus* 2 varr., n., PIC T.c., *C. frenatus*, 3 varr. n., PIC p. 15 Exhange **33**.—*C. bipunctatus* and *biguttatus*, ♂ figs., W. E. SHARP p. 77 Ent. Mo. Mag. **53**.

Cryptonychus thoracicus p. 64, *gestroi* p. 65, **spp. n.**, Africa, ACHARD Ann. Soc. ent. France **86**.

Dactylispa similis p. 67, *sibutensis* p. 68, *flava* p. 69, **spp. n.**, Africa, ACHARD T.c.—*D. miranda* p. 427, *acanthomela* p. 430, *hirtella* p. 431, *angusta* p. 433, *bakeri* p. 435, **spp. n.**, Philippines, GESTRO Ann. Mus. Doria **47**.

Deretrichia laevigata **sp. n.** Neu Guinea, WEISE Tyds. Ent. **60** p. 196.

Diabrotica duodecim-punctata, habits, SELL, J. Econ. Ent. **9** 1916 p. 551–556.

Disonycha abbreviata var. n. *leptolineata*, BLATCHLEY p. 143 Canad. Ent. **49**.

Ditropidus gymnopterus **sp. n.** South Australia, LEA Trans. R. Soc. S. Aust. **41** p. 625.

†*Donacia stiroides* **sp. n.** U.S. p. 145, WICKHAM Amer, J. Sci. **44**.

Downesia tagalica **sp. n.** p. 411, GESTRO Ann. Mus, Doria **47**.

Eurispa yourkiana **sp. n.** Australia, MJÖBERG Ark. Zool. **11** No. 3 p. 19 fig. 12.

Gonophora angusta **sp. n.** Mindanao p. 423 GESTRO Ann. Mus. Doria **47**.

Halticorcus **gen. n.** near *Sphaerophyma*, *platycerii* **sp. n.** Queensland and N.S.W., LEA Trans. R. Soc. S. Aust. **41** p. 319–320.—*H. platyceri*, life-history p. 893 figs., FROGGATT Agric. Gaz. N.S.W. **28**.

Heteraspis vitalisi **sp. n.** Laos p. 310, BERLIOZ Ann. Soc. ent. France **86**.

Hispa formosa **sp. n.** Fort Crampel p. 70, ACHARD Ann. Soc. ent. France **86**.

Hoplionota lila **sp. n.** Seychelles p. 144, fig., MAULIK Ann. Nat. hist. **19**.

Idacantha vouauxi, *jeanneli*, **spp. n.**, E. Africa p. 328, *trifasciata* var. n. *tavetensis* p. 329, LABOISSIÈRE Bull. Soc. ent. France **1917** 1918.

Kuilua brevior **sp. n.** Congo p. 8, PIC Mél. **24**.

Lema orbignyi, variation figs., FRERS pp. 220–222 Physis **3**.

Leptispa=(*Paradownesia*), *godwini*=(*P. fruhstorferi* Gestro), MAULIK pp. 130–132 figs. Ann. Nat. hist. **20**.—*L. denticulata* **sp. n.** Fort Crampel p. 64, ACHARD Ann. Soc. ent. France **86**.—*L. atra* **sp. n.** Philippines p. 398, GESTRO Ann. Mus. Doria **47**.

Licyllus rostralis **sp. n.** Neu Guinea, WEISE Tyds. Ent. **60** p. 217.

Luperus (*Calomicrus*) *mercurini* **sp. n.** Maroc p. 159 fig., LABOISSIÈRE Bull. Soc. ent. France, **1917**.—*L. halli* p. 469, *dilucidus*, *cyanescens*, p. 470, *gracilipes*, *minor*, p. 471, *quadricollis*, *xenoscelis*. p. 472, *perplexus*, *pygidialis*, p. 473, *mediocris* p. 474, **spp. n.**, New Zealand, BROUN Bull. N.Z. Inst. **1**.

Mahutia **gen. n.** *Galerucini*, *alluaudi*, p. 327, *jeanneli* p. 328, **spp. n.**, E. Africa, LABOISSIÈRE Bull. Soc. ent. France **1917** 1918.

Mastostethus discoidalis, *albomaculatus*, p. 7, *signatipennis*, *multinotatus*, **spp. n.**, Amer. mer., *vittatus* var. n. *atrolineatus*, p. 8, PIC Mél. **23**.—*M. pallidofasciatus* **sp. n.** Peru p. 9, PIC Mél. **24**

Megamerus ventralis Western Australia, *femoralis* South and Western Australia, **spp. n.**, LEA Trans. R. Soc. S. Aust. **41** p. 628–630.

Microtheca punctigera, *boliviana*, **spp. n.**, Amer. mer., ACHARD p. 230 Bull. Soc. ent. France **1917**.

Monolepta interrupta **sp. n.** South Australia, LEA Trans. R. Soc. S. Aust. **41** p. 630.

Monoxia batisia **sp. n.** Florida p. 273, BLATCHLEY Canad. Ent. **49**.

Oides bivittata p. 202, *melanophila* p. 203, *kampeni* p. 204, **spp. n.**, Neu Guinea, WEISE Tyds. Ent. **60**.

Olorus speciosus **sp. n.** Laos p. 311, BERLIOZ Ann. Soc. ent. France **86**.

Oncocephala acutangula **sp. n.** Mindanao p. 404, GESTRO Ann. Mus. Doria **47**.

Paropsides bifasciata **sp. n.** Neu Guinea, WEISE Tyds. Ent. **60** p. 201.

Pedrilliomorpha **gen. n.**, *atrosuturalis* **sp. n.** Sikkim p. 9, PIC Mél. **24**.

Phaedon cochleariae ab. *sublaevis* and *fortiterpunctatus* abb. nov., EVERTS Ber. Ned. Ent. Ver. **4** p. 369.

Phyllotreta armoraciae, CHITTENDEN & HOWARD Bull. U. S. Dep. Agric. ent. **535** figs.

Plagiodera versicolora, life-history, pp. 104–109 pl. vii, WEISS & DICKERSON Canad. Ent. **49**.—*P. erythroptera*, vitality, ARANGUA p. 99 Revist. chilena **20** 1916.

Platypria (*Dichirispa*) *tuberculata*, **sp. n.** Fort Crampel p. 71, ACHARD Ann. Soc. ent. France **86**.—*P. invreae* p. 437, *infuscata* p. 439, **spp. n.**, Philippines, GESTRO Ann. Mus. Doria **47**.

Poecilomorpha testaceipennis **sp. n.** W. Africa p. 8, PIC Mél. **24**.

Prasyptera kampeni p. 208, *varicolor* p. 209, **spp. n.**, Neu Guinea, WEISE Tyds. Ent. **60**.

Prionispa bakeri **sp. n.** Mindanao p. 401, GESTRO Ann. Mus. Doria **47**.

Promecotheca pulchella **sp. n.** Philippines p. 408, GESTRO T.c.

Psalidonota australica **sp. n.** Queensland, MJÖBERG Ark. Zool. **11** No. 3 p. 17.

Pseudispella crampeli **sp. n.** Africa p. 66, ACHARD Ann. Soc. ent. France **86**.

Pseudotaxotus (?) *vestitus* **sp. n.** Australia, MJÖBERG Ark. Zool. **11** No. 3 p. 15 figs. 9–10.

Psylliodes arida **sp. n.** South Australia, LEA Trans. R. Soc. S. Aust. **41** p. 626.

Rhyparida opacicollis **sp. n.** Neu Guinea, WEISE Tyds. Ent. **60** p. 195.

Sagra congoana **sp. n.** p. 269, CLAVAREAU Rev. zool. Afric. **4** 1916.—*S. queenslandica* **sp. n.** Queensland, MJÖBERG Ark. Zool. **11** No. 3 p. 14 fig. 8.

Sastra laetabilis p. 206, *kampeni*, *helleri*, p. 207, **spp. n.**, Neu Guinea, WEISE Tyds. Ent. **60**.

Sermylassa halensis var. *picea* fig., PLANET p. 193 Bull. Soc. ent. France **1917**.

Sphaeroderma marginicollis **sp. n.** Neu Guinea, WEISE Tyds. Ent. **60** 1917 218.

Sphaerostola rufopicea fig. p. 271, allied to *Stylosomus* p. 272, BERLIOZ Bull. Soc. ent. France **1916**.

Stethomela helleri p. 199, *trivittata* p. 200, **spp. n.**, Neu Guinea, WEISE Tyds. Ent. **60**.

Sutrea brevicornis p. 215, *taeniata* p. 216, **spp. n.**, WEISE T.c.

Syneta albida, MOZNETTE J. Econ. Ent. **9** 1916 pp. 458–461 pls. xxxii xxxiii.

Tillopsis **gen. n.** near *Corynodes* p. 312, *angustata* **sp. n.** Laos p. 313, BERLIOZ Ann. Soc. ent. France **86**.

Wallacea terminalis **sp. n.** Philippines p. 410 GESTRO Ann. Mus. Doria **47**.

Xenidea lepida **sp. n.** Neu Guinea, WEISE Tyds. Ent. **60** p. 214.

Zeugophora unifasciata **sp. n.** Sikkim p. 9, PIC Mél. **24**.—*Z. scutellaris*, life-history, GRAVE J. Morphol. **30** pp. 245–253 2 pls.

EROTYLIDAE.

Notes on genera, with synonymy, ARROW pp. 137–143 Ann. Nat. hist. **20**.

Amblyopus pulchellus p. 147, *lateralis*, *tristis*, p. 148, **spp. n.**, Africa, ARROW T.c.

Encaustes africana **sp. n.** Congo p. 144, ARROW T.c.

Euxestus and *Tritomidea*, synonymy, ARROW p. 368 T.c.—*E. angustus* **sp. n.** S. Africa p. 155, ARROW T.c.

Ischyrus tripunctatus **sp. n.** Florida p. 238, BLATCHLEY Canad. Ent. **49**.—*I. dunedinensis* n. n. for *tripunctatus*, ID. p. 279 T.c.

Megalodacne laeta p. 143, *pubescens* p. 144, **spp. n.**, Africa, ARROW Ann. Nat. hist. **20**.

Micrencaustes spinipes **sp. n.** Congo p. 145, ARROW T.c.

Mimodacne **gen. n.** for part of *Megalodacne*, *rhodesiaca*, p. 367, *belgarum* p. 368, **spp. n.**, Africa, BEDEL Ann. Soc. ent. France **85**.

Palaeolybas nigrocinctus p. 152, *apicalis*, *bizonatus*, *laetus*, p. 153, *rufocinctus*, *ferrugineus*, p. 154, **spp. n.**, Africa, ARROW Ann. Nat. hist. **20**.

Petaloscelis fulvus, hilaris, p. 146, *monommoides* p. 147, spp. n., Africa, ARROW T.c.

Tritoma soror, spilota, p. 149, *partita, alternans*, p. 150, *tibialis, flaviventris*, p. 151, spp. n., Africa, ARROW T.c.—*T. dissimilis* sp. n. Florida p. 140, BLATCHLEY Canad. Ent. **49**.

ENDOMYCHIDAE.

Sphaerosoma subglabrum p. 140 *bicome, normandi* f. 13, Algeria, *tingitunum* Tangier p. 141, spp. n., PEYERIMHOFF Ann. Soc. ent. France **86**.

Trochoideus=(*Pseudopaussus* Sch.), GESTRO p. 357 Ann. Mus. Genova **47**.

COCCINELLIDAE.

The larvae of Coccinellidae, BÖVING P.U.S. Nat. Mus. **51** pp. 621–650 pls. 118–121.

Mycophagous Coccinellidae, LICHTENSTEIN Bull. Soc. ent. France **1917** (298–302).

Adalia; *bipunctata* etc., variation and heredity, PALMER Ann. ent. Soc. Amer. **10** pp. 289–302.

†*Anatis resurgens* sp. n. Florissant miocene p. 465 pl. xxxviii f. 1, WICKHAM P.U.S. nat. Mus. **52**.

Chilomenes hiugaensis sp. n., TAKIZAWA Sapporo Trans. Nat. Hist. Soc. **6** pp. 220–222.

Epilachna kampeni sp. n. Neu Guinea WEISE Tyds. Ent. **60** p. 219.

Hyperaspis binotata, larval structure, BÖVING P.U.S. nat. Mus. **51** pp. 622–628 pls. 118 & 119.

Orcus coxalis sp. n. Queensland, WEISE Tyds. Ent. **60** p. 221.

Ptychanatis yedoensis sp. n. TAKIZAWA Trans. Sapporo Nat. Hist. Soc. **6** p. 220–222.

Rhizobius gratus Neu Guinea, *amabilis* p. 223 Misol, WEISE Tyds. Ent. **60**.

Scymnodes longicornis p. 221, *papuanus, punctiger*, p. 223, spp. n., Neu Guinea, WEISE T.c.

Scymnus (*Pullus*) *mitsuhashii* sp. n. TAKIZAWA Trans. Sapporo Nat. Hist. Soc. **6** p. 220–222.—*S. oculatus* sp. n. Florida p. 140, BLATCHLEY Canad. Ent. **49**.

CORYLOPHIDAE.

Anisomeristes doderoi sp. n. Algeria p. 133, PEYERIMHOFF Ann. Soc. ent. France **86**.

Arthrolips insulaelongae sp. n. Seychelles, figs., SCOTT Ann. Nat. hist. **19**.

Daubania gen. n. p. 19, *seychellarum* sp. n. p. 21, SCOTT T.c.

Lewisium seychellarum sp. n. p. 22 figs., SCOTT T.c.

Meioderus quinssyanus sp. n. Seychelles, fig., SCOTT p. 16 T.c.

Orthoperus muniae Rangoon p. 29, sp. n. figs., SCOTT T.c.

Rhypobius aquilinus sp. n. Amirantes isld. p. 27, figs., SCOTT T.c.

Sacium indiscretum sp. n. Algeria p. 132, PEYERIMHOFF Ann. Soc. ent. France **86**.—*S. picaultianum* p. 7, *grossinianum* p. 9, *roslanianum* p. 10, *rochonianum* p. 12, spp. n.., Seychelles, figs., SCOTT Ann. Nat. hist. **19**.

Sericoderus (*Anisomeristes*) *seychellensis* sp. n. p. 18, figs., SCOTT T.c.

STREPSIPTERA.

Pyrilloxenos compactus, natural history, MISRA pp. 124–129, p. xviii & p. xix figs. 1–4 Mem. Dep. Agric. India Ent. **5**.

HYMENOPTERA.

MORICE and DURRANT give corrections and additions to their 1914 paper on genera, etc.; Tr. ent. Soc. London **1916** pp. 432–44.

Unauthorised changes of names; POCHE Ent. Mitt. **6** pp. 45–54.

Determination of the *Hymenoptera* (except *Apidae*) described by Provancher, GAHAN and ROHWER Canad. Ent. **49** pp. 298, etc., etc.

Determinations and synonymy of the F. Smith *Aculeata*, PERKINS Ent. Mo. Mag. **53** pp. 71–76, etc.

Haworth's collection, MORLEY p. 87 Ent. Mo. Mag. **53**.

APIDAE.

Examination of Kirby collection, with much synonymy, PERKINS Ent. Mo. Mag. **53** pp. 45–52.

Contributions to the biology of Megachile and Anthidium. (Danish.), NIELSON Fra Naturens Værksted Kobenhavn. **5**, 1916, pp. 325–365, 17 figs.

Collecting bees and wasps, SLADEN Canad Ent. **49** pp. 113–117.

Agapostemon heterurus Peru p. 240, *tyleri* Mexico p. 241, **spp. n.**, COCKERELL Ann. Nat. Hist. **20**.—*A. obscuratus* var. n. *abjectus*, *nasutus* var. *a*, COCKERELL p. 436 T.c.

Allodape stellarum p. 195, *malleifera* p. 196, *pyrifera*, *mediorufa*, p. 197, **spp. n.**, Natal, COCKERELL Ann. Durban Mus. **1** 1916.—*A. maurula* **sp. n.** p. 44, COCKERELL Ann. Durb. Mus. **2**.

Alloperdita **subg. n.** of *Perdita* for *P. novaeangliae*, VIERECK p. 241 Bull. Amer. Mus. 37.

Ancyloscelis; COCKERELL p. 304 Ann. Nat. hist. **20**.

Andrena aequatorialis p. 235, *boswendica* p. 236, **spp. n.**, Africa, VIERECK Bull. Amer. Mus. **37**.—*A. lugubrescens* **n. n.** for *lugubris* Lep. p. 282, *cussariensis* var. n. *kohatensis*, *chionospila*, p. 283, *subspinigera* p. 284, *quettensis*, *bentoni*, p. 285, *praecocella* p. 286, **spp. n.**, India, COCKERELL Ann. Nat. Hist. **19**.—*A. alopex* **sp. n.** Japan p. 86, COCKERELL Entomol. **50**.—*A. bucephala* and *Nomada bucephalae*, PERKINS p. 198 Ent. Mo. Mag. **53**.

Anthidium minutissimum to *Dianthidium*, COCKERELL p. 164 Entomol. **50**.

Anthophora mimadvena **sp. n.** Durban p. 207, COCKERELL Ann. Durban Mus. **1** 1916.—*A. connexiformis*, Quetta p. 287, *A.* (*Micranthophora*) *albopicta* p. 288, *leucorhina* p. 289, Persia, **spp. n.**, COCKERELL Ann. Nat. hist. **19**.

Apis fasciata, GOUGH Bull. Soc. ent. Egypte **9** pp. 25–32.—*A. indica*, NEWTON Agric. J. India **12** pp. 44–57, pl.

Bombus; two divisions *Odontobombus* and *Anodontobombus*, KRÜGER Ent. Mitt. **6** pp. 55–66.—*Bombus*, notes. Jørgensen Flora ag Fauna **1917** p. 30–32, —*B. auricomus* life-history, FRISON pp. 277–286, 2 pls., Ann. Amer. ent. Soc. **10**.—*B. geei* p. 265, *kulingensis* p. 266, **spp. n.**, China, COCKERELL Ent. **50**.—*B. niveatus callophenax* subsp. n. p. 122, COCKERELL Psyche **24**.

Camptopoeum reedi **sp. n.** Chile p. 440, COCKERELL Ann. Nat. hist. **20**.

Centris maroniana **sp. n.** Guiana p. 475, COCKERELL Ann. Nat. hist. **19**.

Chalepogenus globulosus, ♀, COCKERELL p. 302 Ann. Nat. hist. **20**.

Coelioxys and *Megachile*; HOLMBERG Physis **3** p. 274.—*C. durbanensis* **sp. n.** p. 191, COCKERELL Ann. Durban Mus. **1**, 1916.—*C. dolichacantha* **sp. n.** p. 41, COCKERELL Ann. Durb. Mus. **2**.

Colletes spiloptera **sp. n.** Panama p. 363, COCKERELL Ent. News **28**.—*C. speculiventris* **sp. n.** Paraguay p. 438, COCKERELL Ann. Nat. hist. **20**.

Crocisa guineensis, Radots.=*C. picta* Sm., COCKERELL Ann. Durb. Mus. **1** pp. 460–468.

Diadasia australis knabiana subsp. n. p. 304, COCKERELL Ann. Nat. hist. **20**.

Dianthidium arizonicum **sp. n.**, ROHWER p. 192, nest MIDDLETON p. 193, pl. xv, P. ent. Soc. Washington **18**.

Epeolus xanthurus Ecuador p. 298, *rugulosus* Panama p. 299, **spp. n.**, *bifasciatus obscurus* subsp. n. p. 298, COCKERELL Ann. Nat. hist. **20**.

Epicharis phenacura, *conura*, **spp. n.**, Costa Rica, p. 200, COCKERELL Ent. News **28**.

Euglossa mandibularis var. n. *bernardina* p. 144, *variabilis* var. n. *hemichlora* p. 146, *cyanura* Panama, *charapensis* Peru, **spp. n.** p. 146, COCKERELL Canad. Ent. **49**.

Eulaema amabilis **sp. n.** Manaos p. 476, COCKERELL Ann. Nat. Hist. **19**.

Exomalopsis vincentana **sp. n.** Antilles p. 302, COCKERELL Ann. Nat. Hist. **20.**

Glossura **subg. n.** type *Euglossa pilipentris* Guer., COCKERELL p. 144 Canad. Ent. **49.**

Halictus expertus p. 209, *diversiformis* p. 211, **spp. n.**, Cape Colony, COCKERELL Ann. Durban Mus. **1, 1916.**—*H. rhodaspis* **sp. n.** p. 46, COCKERELL Ann. Durb. Mus. **2.**—*H. nigroscopaceus* p. 4, *mjoebergi* p. 5, *tamburinei* p. 6, **spp. n.**, Queensland, FRIESE Ark. Zool. **11** No. 2.—*H.* (*Chloralictus*) *politissimus* p. 189, *rhodognathus* p. 190, **spp. n.** Texas, COCKERELL J. N. York Ent. Soc. **25.**

Heriades bevisi, *marleyi*, p. 199, *chubbi* p. 200, **spp. n.**, Natal, COCKERELL Ann. Durban Mus. **1** 1916.—*H. chlorops* p. 42; *punctulatus* p. 43, **spp. n.**, COCKERELL Ann. Durb. Mus. **2.**

†*Heriades priscus* **sp. n.** Florissant miocene p. 383, COCKERELL P.U.S. Nat. Mus. **52.**

Hoplitis anodontura **sp. n.** Mexico p. 235, COCKERELL Ann. Nat. Hist. **20.**

Hypanthidium taboganum Panama p. 252, *melanopterum* Mexico p. 253, **spp. n.**, COCKERELL Canad. Ent. **49.**

Isepeolus bruneri **sp. n.** Argentina p. 479, COCKERELL Ann. Nat. Hist. **19.**

Lithurgus apicalis littoralis subsp. n. p. 191, COCKERELL J. N. York Ent. Soc. **25.**

Lonchopria alopex **sp. n.** Bolivia p. 480, COCKERELL Ann. Nat. Hist. **19.**—*L. rufipennis* **sp. n.** Argentina p. 439, COCKERELL Ann. Nat. Hist. **20.**

Megachile mediocana p. 201, *melliferina* p. 202, *infrapicta*, *familiaris*, p. 203, **spp. n.**, Natal, COCKERELL Ann. Durban Mus. **1** 1916.—*M. mediocana bituberculata* subsp. n. p. 464, COCKERELL, T.c.—*M. venustella* **sp. n.** p. 41, COCKERELL Ann. Durb. Mus. **2.**—*M.* (*Oligotropus*) *sasakiella* **sp. n.** Tokyo p. 85, COCKERELL Entomol. **50.**—*M. disparipennis* **sp. n.** Texas p. 192, COCKERELL J. N. York ent. Soc. **25.**—*M. stomatura* Trinidad p. 237, *holomelaena*, *atramentata*, p. 238, *bruneriella* p. 239, Argentina, **spp. n.**, COCKERELL Ann. Nat. Hist. **20.**

Melissodes martinicensis **sp. n.** Antilles p. 303, COCKERELL T.c.

Mesonychium dugesi **sp. n.** Mexico p. 477, COCKERELL Ann. Nat. Hist. **19.**

Mesotrichia bevisi **sp. n.** p. 461, COCKERELL Ann. Durb. Mus. **1.**—*M. latipes basiloptera* subsp. n. p. 349, COCKERELL Philipp. J. Sci. D. **12.**

Nomada bucephalae **sp. n.** p. 12, *conjungens* p. 13, PERKINS Ent. Mo. Mag. **53.**—*N. carcarensis* **sp. n.** Argentina p. 236, *barcelonensis* **n. n.** for *excellens* Pér. p. 237, COCKERELL Ann. Nat. Hist. **20.**

Nomia perornata p. 212, *megalepis*, *megacantha*, p. 214, *pyrura* p. 215, **spp. n.**, Natal, *vulpina umbiloensis* p. 212 and *tridentata natalensis* p. 213, subspp. n., COCKERELL Ann. Durb. Mus. **1** 1916.—*N fuesana for N. friesei Clk.*, COCKERELL p. 464 T.c.—*N. aureovittata* p. 465, *bevisana* p. 466, *concinnula*, *platycephala*, p. 467, **spp. n.**, COCKERELL p. 460-468 T.c.—*N. alboscopacea* p. 6, *luteofasciata* p. 7, **spp. n.**, Australia, FRIESE Ark. Zool. **11** No. 2.

Nomioides heluanensis, *storeyi*, **spp. n.**, Egypt, DEBSKI Bull. Soc. ent. Egypte **10.**

Pachymelus mediocinctus **sp. n.** Madagascar p. 475, COCKERELL Ann. Nat. Hist. **19.**

Pasiphae cyanea melanura subsp. n. p. 236, COCKERELL Ann. Nat. Hist. **20.**—*P. chrysostoma* p. 438, *leucostoma* p. 439, **spp. n.**, Argentina, COCKERELL T.c.

Perdita (*Cockerellia*) *bequaerti* **sp. n.** New Jersey p. 241, VIERECK Bull. Amer. Mus. **37.**

Prosopis bevisi **sp. n.** p. 45, COCKERELL Ann. Durb. Mus. **2.**—*P. transvittata* **sp. n.** Mexico p. 437, COCKERELL Ann. Nat. hist. **20.**

Psaenythia pachycephala **sp. n.** Argentina, *thoracica crawfordi* subsp. n., COCKERELL p. 302 Ent. News **28.**

Ptilothrix tricolor, COCKERELL p. 303 Ann. Nat. hist. **20.**

Sphecodes japonicus, COCKERELL p. 85 Entomol. **50.**

Stelis veraecrucis **sp. n.** Mexico p. 254, COCKERELL Canad. Ent. **49.**

Stilprasoma turneri **sp. n.** Australia, FRIESE Ark. Zool. **11** No. 2 p. 4.

Tetralonia sheffieldi umbiloensis var. n. p. 40, COCKERELL Ann. Durb. Mus. **2.** —*T. kohatensis* **sp. n.** p. 287, COCKERELL Ann. Nat. Hist. **19.**

Thrinchostoma millari **sp. n.** Durban p. 205, COCKERELL Ann. Durban Mus. **1** 1916.

Triepeolus pruinolus **sp. n.** Argentina p. 478, COCKERELL Ann. Nat. hist. **19.** —*T. cuneatus, concinnus,* p. 300, *medusa* p. 301, **spp. n.,** Mexico, COCKERELL Ann. Nat. hist. **20.**

Trigona mirandula Costa Rica p. 122, *curriei* Liberia, *musarum* Costa Rica, p. 123, *salvatoris* Guatemala p. 124, *perangulata, pachysoma,* Panama, p. 125, *nitidula* Argentina, *opaca* Panama, p. 126, *atomaria* Costa Rica, *ferricauda* Panama, p. 127, **spp. n.,** *beccarii jombenensis* subsp. n. p. 123, COCKERELL Psyche **24.**

Xenoglossodes wilmattae **sp. n.** Texas p. 191, COCKERELL J. N. York ent. Soc. **25.**

Xylocopa draconis China p. 473, *punctifrons* Africa p. 474, **spp. n.,** COCKERELL Ann. Nat. hist. **19.**—*X. tabaniformis parkinsonie* subsp. n. COCKERELL p. 192 J. N. York ent. Soc. **25.**

VESPIDAE, EUMENIDAE.

Ancistrocerus tahoensis, lucidus, **spp. n.,** California p. 235, ROHWER P. U. S. nat. Mus. **53.**—*A. parietinus,* nest, NORDSTRÖM Ent. Tidskr. **38** p. 322.

Eumenes brunneus p. 348, *stenogaster, sternalis,* p. 353, *xanthogaster* p. 359, *robustus* p. 360, *tricinctus* p. 361, *crassicornis, pachygaster,* p. 362, **spp. n.,** Amer. bor., *belfragei aureus* subsp. n. p. 352, DWIGHT Ann. ent. Soc. Amer. **10.**

Odynerus blandinus p. 236, *giffardi,* p. 237, *robustus, eldoradensis,* p. 238, **spp. n.,** California, ROHWER P. U. S. nat. Mus. **53.**

Polistes, in Egypt, CLAINPANAIN p. 54–58, Bull. Soc. ent. Egypte **9.**—*P. utakwae* pl. i f. 8 p. 13, *stotherti* p. 14 f. 9, **spp. n.,** MEADE-WALDE B. O. U. Exp. **1** 1915.—*P. metricus,* life history, habits, PELLETT Proc. Iowa Ac. **23** 1916 p. 275–284 ff. 43, 44.

Synagris; Congo species, SCHOUTEDEN pp. 91–96 Rev. zool. Afric. **5.**—*S. cornuta,* BRIDWELL p. 261 P. Hawai ent. Soc. **3.**

Vespa austriaca and *rufa,* distinctions, PERKINS J. Torquay Nat. Hist. Soc. **2** p. 142–145.—*V. austriaca,* HARRISON Vasculum **1** pp. 113–115.—*V. crabro,* food-habits, BORDAS pp. 5–7 Insecta **7.**—*V. sylvestris,* emergences, SCOTT p. 17 Ent. Mo. Mag. **53.**

FOSSORIA (SPHEGIDAE).

Monograph of *Bembicinae* of North America, with account of habits, PARKER P.U.S. nat. Mus. **52** pp. 1–155, 229 figs.

Instinct of stinging and poisoning, ROUBAUD Bull. biol. **51** pp. 391–419.

Stinging powers, RABAUD C.R. Ac. Paris pp. 680–683.

Agenia varipalpis Cam. and *ornaticollis* Cam. = *Pseudagenia* Kohl., BRAUNS p. 243 Ann. Transv. Mus. **5.**

Ageniella crassicornis p. 108, *festina, fraternella,* p. 109, *minuscula* p. 110, **spp. n.,** U.S., BANKS Bull. Mus. Harvard **61.**

Agenioideus expulsus **sp. n.** Queensland p. 74, TURNER Tr. ent. Soc. Lond. **1917.**

Allochares **gen. n.** near *Aporinellus, bruesi* **sp. n.** Texas, BANKS p. 98 Bull. Mus. Harvard **61.**

Ammophila coeruleoornata Cam. and *A. maculifrons* Cam. = *A tenuis* Palis. p. 241, BRAUNS Ann. Transv. Mus. **5.**

Ampulex crawshayi Nyasaland p. 80, *kristenseni* Abyssinia p. 81, **spp. n.,** TURNER Tr. ent. Soc. Lond. **1917.**—*A. jansei* Cam. = *nigrocoerulea* Sauss. p. 240, BRAUNS Ann. Transv. Mus. **5.**

Anoplius dolli **sp. n.** Texas p. 104, BANKS Bull. Mus. Harvard **61.**—*A. hirtiscapus* Cam. is a *Clavelia,* BRAUNS p. 242 Ann. Transv. Mus. **5.**

Aporinellus completus, medianus, **spp. n.,** U.S. p. 97, BANKS Bull. Mus. Harvard **61.**—*A. californicus* **sp. n.** p. 240, ROHWER P.U.S. nat. Mus. **53.**

Austrosalius **gen. n.** p. 75 type *Ferreolomorpha artemis,* and incl. *Salius malignus,* Sm., TURNER Tr. ent. Soc. Lond. **1917.**

Bembex obtusa p. 436, *albidula* p. 438. *odontopyga* p. 439, *liturata*, *opima*, p. 439, **spp. n.**, Africa, *forcipta* Handl. = (*massaica* Cam.) p. 439, TURNER Ann. Nat. hist. **19.**—*B. atrospinosus* **sp. n.** S. Africa p. 289, TURNER Ann. Nat. hist. **20.**—*Bembix* = (*Bembex* auctt.) p. 75, *arcuata* p. 81, *hinei* p. 86, *stenobdoma* p. 94, *rugosa* p. 95, *foxi* p. 96, *comata* p. 100, *melanaspis* p. 109, *helianthopolis* p. 113, *latifrons* p. 116, **spp. n.** U.S., PARKER P.U.S. nat. Mus. **52.**—*B. testaceicauda* = *mobii* Handl. p. 241, BRAUNS Ann. Transv. Mus. **5.**

Bicyrtes = (*Bembidula*) p. 59, *annulata* p. 67, *gracilis* p. 68, **spp. n.** U.S., PARKER P.U.S. nat. Mus. **52.**

Braunsomeria arnoldi **sp. n.** Rhodesia p. 352, TURNER Ann. Nat. hist. **20.**

Calotachytes **subg. n.** p. 10 for *T. marshalli*, etc., TURNER T.c.

Campsomeris (*Trielis*) *bulawayoensis* **sp. n.** p. 355, *curvivitta* Cam. = (*aureola* S. and S.) p. 356, TURNER T.c.

Cemonus giffardi **sp. n.** California p. 246, ROHWER P.U.S. nat. Mus. **53.**

Cerceris denticularis p. 113, *belfragei*, *vanduzeei*, p. 114, *hesperina* p. 115, **spp. n.** U.S., BANKS Bull. Mus. Harvard **61.**—*C. armigera* p. 104, *unispinosa* p. 105, **spp. n.** Queensland, TURNER Ann. Nat. hist. **19.**—*C. melanispila* Cam. and *jansei* Cam. = *C. diodonta* Schl.; *C. whiteana* Cam. = *spinicauda* Cam., BRAUNS p. 239 Ann. Transv. Mus. **5.**

Ceropales tenuatus, to *Irenangelus*, TURNER p. 358 Ann. Nat. hist. **20,**

Crabro veitchi **sp. n.** Fiji p. 84, TURNER Tr. ent. Soc. Lond. **1917.**—*C. erythrotoma* Cam. is a *Dasyproctus*, BRAUNS p. 241 Ann. Transv. Mus. **5.**

Cryptocheilus rugosus p. 101, *austrinus*, *inaequalis*, p. 102, **spp. n.**, U.S., BANKS Bull. Mus. Harvard **61.**—*C. commixtus*, TURNER p. 78 Tr. ent. Soc. Lond. **1917.**

Cryptosalius **gen. n.** p. 76 type *Pseudagenia rava*, *pandiyanus* **sp. n.**, India p. 77, TURNER T.c.

Cyphononyx vitiensis **sp. n.** p. 78, TURNER T.c.

Dielis pilipes, BANKS p. 111 Bull Mus. Harvard **61.**

Dimorpha ruficaudata **sp. n.** Zomba p. 318, TURNER Ann. Nat. hist. **19.**—*D. flavipennis* **sp. n.** E. Africa p. 297, TURNER Ann. Nat. hist. **20.**

Discolia pallidipilosella Cam. = *wahlbergi* Sauss.; *Dielis transvaalensis* Cam. = *Elis barbata* Sauss., *Myzine erythrostomus* Cam. = *M. rufifrons* Fab., BRAUNS Ann. Transv. Mus. **5** p. 238–245.

Dolichomutilla triangulipyga, *rotundipyga*, **spp. n.** Africa p. 38, STRAND Ent. Mitt. **6.**

Dolichurus greenei **sp. n.** Virginia p. 212, ROHWER P. ent. Soc. Washington **18.**

Elis bodkini **sp. n.** Guiana p. 317, TURNER Ann. Nat. hist. **19.**—*E.* (*Mesa*) *diversicornis* p. 352, *mutica*, *spinicollis*, p. 353, **spp. n.** Africa, TURNER Ann. Nat. hist. **20**—*E. nursei* ♀, p. 60, *E.* (*Mesa*) *heterochroa* p. 61, *arnoldi* p. 63, **spp. n.** Africa, TURNER Tr. ent. Soc. Lond. **1917.**

Encopognathus brownei **sp. n.** E. Africa p. 106, TURNER Ann. Nat. hist. **19.**

Entomognathus rugosissimus **sp. n.** Nyasaland p. 83, TURNER Tr. ent. Soc. Lond. **1917.**

Ephutomorpha contigua p. 54, *lurida*, *diversipes*, p. 55, *unilineata* p. 56, *setigera* p. 57, **spp. n.** Queensland, TURNER T.c.

Epipompilus delicatus **sp. n.** Bugaba p. 359, *aztecus* Cress. = (*maximiliani* Kohl) p. 360, TURNER Ann. Nat. hist. **20.**

Gilbertella **subg. n.** vide *Homonotus*. Turner.

Hemipepsis; validity, TURNER p. 80 Tr. ent. Soc. Lond. **1917.**

Holotachytes **subg. n.** p. 10 for *T. diehroa*, TURNER Ann. Nat. hist. **20.**

Homonotus, notes pp. 147–151, *nursei* India p 149, *H.* (*Gilbertella* subg. n. p. 150), *disparilis* Nyasaland p. 151, **spp. n.**, TURNER Ann. Nat. hist. **19.**—*H. spilonotus* Cam. = *wasmanni*, BRAUNS p. 242 Ann. Transv. Mus. **5.**

Irenangelus reversus Sm. (as *Agenia*) = *hornus* Schulz, *mexicanus* **sp. n.**, TURNER p. 357 Ann. Nat. hist. **20.**

Janseia longitarsis Cam. is an *Eidopompilus* Kohl, BRAUNS p. 243 Ann. Transv. Mus. **5.**

Larropsis greenei sp. n. New Jersey p. 173, ROHWER P. U. S. nat. Mus. **53.**

Liris africana sp. n. Rhodesia p. 295, TURNER Ann. Nat. hist. **20.**

Lyrops quadricolor to *Tachysphex*, TURNER p. 43 T.c.

Mellinus arvensis, habits, RABAUD Bull. biol. **51** pp. 331–346.

Microbembex aurata p. 121, *hirsuta* p. 122, spp. n. U. S., PARKER P. U. S. Nat. Mus. **52.**

Miscophus rhodesianus, *cyanescens*, spp. n. Africa p. 297, TURNER Ann. Nat. hist. **20.**

Mutilla subcomata var. n. *ferrugineipes* p. 65, *rufipes* var. n. *pyramidarum* p. 67, ANDRÉ Mem. Soc. ent. Egypte **1** No. 2 1910.—*M. detitrespilosa* sp. n. Africa p. 40, STRAND Ent. Mitt. **6.**

Mygnimia hesperina sp. n. California p. 102, BANKS Bull. Mus. Harvard **61.**

Myzine aterrima sp. n. Zambesi p. 351, TURNER Ann. Nat. hist. **20.**—*M. cruentata* p. 453, *eurygaster* p. 457, *pallidipes* p. 456, *pinguis* p. 458, spp. n., TURNER Ann. S. Afric. Mus. **15.**

Notogonia, synonymy, TURNER pp. 319, 320 Ann. Nat. hist. **19.**—*N. dentipes*, *neavei*, spp. n. Africa p. 294, TURNER Ann. Nat. hist. **20.**

Nysson magrettii sp. n. Erythrea p. 374, MANTERO Ann. Mus. Doria **47.**—*N.* (*Acanthostethus*) *brisbanensis* ♂, TURNER p. 106 Ann. Nat. hist. **19.**—*N.* (*Hyponysson*) *raui* sp. n. Missouri p. 176, ROHWER P. U. S. Nat. Mus. **53.**—*N.* (*Brachystegus*) *pacificus* sp. n. California p. 249, ROHWER T.c.

Odontomutilla luculediana sp. n. Africa p. 35, STRAND Ent. Mitt. **6.**

Oxybelus; the british, *argentatus* valid, MORICE pp. 238 &c. Ent. Mo. Mag. **53.**

Pedinaspis anomala sp. n. Texas p. 100, BANKS Bull. Mus. Harvard **61.**

Philanthus triangulum, var. n. *obliteratus* p. 2, habits p. 3, PIC Echange No. 381 hors texte.—*P. spilaspis* Cam. and *P. trichiocephalus* = *P. histrio* Fahr.; *P. transversus* Cam. = *diadema Fab.*, p. 241, BRAUNS Ann. Trans. Mus. **5.**

Pison deperditum Port Darwin, *multistrigatum*, p. 109, *strigulosum* p. 110, *carinatum* p. 111, Africa, *flavolimbatum* Guiana p. 112, spp. n., *xanthopus* Br., TURNER Ann. Nat. hist. **19.**—*P. papuanum* = (*constrictum* T.), TURNER p. 326 T.c.—*P. transvaalensis* Cam. and *clypeatus* Cam. = one spec., BRAUNS Ann. Transv. Mus. 5 p. 238-245.

Planiceps compressus, *hirsutus*, p. 99, *assimilis* p. 100, spp. n. Amer. bor., BANKS Bull. Mus. Harvard **61.**

Plesia pacificatrix Cam. and *P. transvaalensis* = *Myzine* ♂ ♂ p. 239, BRAUNS Ann. Trans. Mus. **5.**

Pompiloides subcylindricus sp. n. Virginia p. 103, BANKS Bull. Mus. Harvard **61.**

†*Pompilus cardui* sp. n. England p. 11, PERKINS Ent. Mo. Mag. **53.**

†*Pompilus scelerosus* sp. n. ambre de la Baltique, MEUNIER Tydschr. Ent. **60** p. 181.

Priocnemus and *Ageniella*, BANKS p. 101 Bull. Mus. Harvard **61.**

Prosopigastra neavei sp. n. Rhodesia p. 325, TURNER Ann. Nat. hist. **19.**

Psammochares, taxonomy pp. 65 &c., *muiri* Amboina p. 67, *pluto* Queensland p. 69, *berthoudi* p. 70, *vassei* p. 71, Australia, *bassianus* Tasmania p. 72, *basilicus* p. 73, *perpulcher* p. 74, Australia, spp. n., TURNER Tr. ent. Soc. Lond. **1917.**—*P. scudderi* p. 104, *difficilis*, *cleora*, p. 105, spp. n. U.S., *philadelphicus* var. n. *floridensis* p. 106, BANKS Bull. Mus. Harvard **61.**

Pseudagenia submetallica sp. n. Texas p. 108, BANKS T.c.—*P. viridipennis* Cam. and *Pompilus jansei* Cam. belong to *Parapompilus*, BRAUNS p. 242 Ann. Transv. Mus. **5.**

Pterombrus williamsi sp. n. Bartica p. 63, TURNER Tr. ent. Lond. **1917.**

Rhopalum tuberculicorne p. 107, *testaceum* p. 108, spp.n. Queensland, TURNER Ann. Nat. hist. **19.**

Salius lineaticollis = *Mygnimia tamisieri* Guer., BRAUNS p. 243 Ann. Transv. Mus. **5.**—*S. irenensis* Cam. = *Cyphononyx* Dahlb, BRAUNS p. 243 Ann. Transv. Mus. 5.

Sapyga furtiva sp. n. India p. **318,** TURNER Ann. Nat. hist. **19.**

Scolia perpolita **sp. n.** Uganda p. 354, *wahlbergi* = (*D. pallidipilosa* Cam.), *praecana* = (*D. heterotrichia* Cam.), p. 355, TURNER Ann. Nat. hist. **20.**—*S.* (*Trielis*) *peringueyi* **sp. n.** p. 462, TURNER Ann. S. Africa. Mus. **15.**—*S. manilae*, MUIR p. 207 Ann. ent. Soc. Amer. **10.**

Silaon major **sp. n.** Washington p. 247, ROHWER P. U. S. Nat. Mus. **53.**

Solenius (*Hypocrabro*) *giffardi* **sp. n.** California p. 242, ROHWER P. U. S. Nat. Mus. **53.**

Sophropompilus tumifrons **sp. n.** California p. 103, BANKS Bull. Mus. Harvard **61.**

Steniolia nigripes p. 8, *albicantia* p. 12, **spp. n.** U.S., PARKER P. U. S. Nat. Mus. **52.**

Stictiella **gen. n.** p. 21 type *Monedula formosa* Cr., *melanosterna* p. 30, *callista* p. 34, *bituberculata* p. 36, *melampous* p. 43, *megacera* p. 49, *divergens* p. 55, **spp. n.** U.S., PARKER T.c.

Stizus flexuosefasciatus p. 367, *erythraeensis* p. 368, *beccarii* p. 369, *anchoratus* p. 371, **spp. n.** Erythrea, *congoensis* n. n. for *neavei* Kohl p. 376, MANTERO Ann. Mus. Doria **47.**—*S. pacificus* **sp. n.** Fiji p. 82, TURNER Tr. ent. Soc. Lond. **1917.**—*S. turneri* p. 668 fig. **sp. n.** N.S.W FROGGATT Agric. Gaz. N.S.W. **28.**—*S. johannis* Cam. = *oxydorcus* Handl.; *S. erythraspis* Cam. = *dewitzi* Handl., BRAUNS p. 240 Ann. Transv. Mus. **5.**

Tachysphex excelsus Tibet p. 320, *auropilosus* p. 321, *depilosellus* p 322, *brinckerae*, *subfuscatus*, p 323, *strigatus* p. 324, *vulneratus* p. 325, Africa, **spp. n.**, TURNER Ann. Nat. hist. **19.**—*T. marshalli* **sp. n.** Rhodesia p. 293, TURNER Ann. Nat. hist. **20.**—*T. washingtoni* **sp. n.** p. 172, ROHWER P. U.S. nat. Mus. **53.**—*T. giffardi* p. 244, *eldoradensis*, *plesia*, p. 245, **spp. n.** California, ROHWER T.c.

Tachytes neavei p. 13, *perornata* p. 14, *praestabilis* p. 16, *labilis*, *hamiltoni*, p. 17, *simulatrix* p. 18, *bimetallica*, *moerens*, p. 21, *distanti* p. 22, *volubilis* p. 24, *nudiventris* p. 25, *separabilis* p. 27, *irritabilis* p. 28, *associata* p. 29, *kristenseni* p. 30, *ugandensis*, *opposita*, p. 31, *neglecta* p. 32, *versatilis* p. 34, *habilis* p. 35, *erynnis* p. 37, *inexorabilis* p. 36, *pulchricornis* with subsp. *kolaensis* p. 38, *disputabilis*, *instabilis*, p. 39, *lachesis*, *megaera*, p. 40, *notabilis* p. 41, *silverlocki* p. 42, **spp. n.** Africa, *T. trivittatus* K. to *Notogonia* and *agilis* to *Tachysphex*, p. 43, TURNER Ann. Nat. hist. **20.**—*T. exclusa* p. 290, *braunsi* p. 291, **spp. n.** Africa, TURNER Ann. Nat. hist. **20.**

Tiphia parallela, importation, D'EMMEREZ Bull. ent. Res. **8** pp. 93–102.

Trielis alcione **sp. n.** U.S. p. 112, BANKS Bull. Mus. Harvard **61.**

Xanthampulex, composition, TURNER p. 359 Ann. Nat. hist. **20.**

Xylocelia beulahensis p. 174, *virginiana*, **spp. n.**, ROHWER P. U. S. nat. Mus. **53.**

Zaspilothynnus striatifrons **sp. n.** Queensland p. 58, TURNER Tr. ent. Soc. Lond. **1917.**

FORMICIDAE.

Catalogue of genera, with new names for tribes and sections, FOREL, Bull. Soc. Vaud. **51** pp. 229–253.

Apterons and subapterous castes, origin, etc., WHEELER P. Ac. Washington **3** p. 109–117.

The ants described by Asa Fitch, WHEELER p. 26–29 Psyche **24.**

Myrmecophilous notes, DONISTHORPE Ent. Rec. **29** pp. 30–33, 48–50.

Summary of Wheeler on ants of baltic amber, DONISTHORPE pp. 112–116 Ent. Rec. **29.**

Critical notes on Santschi's 1916 paper, GALLARDO pp. 48–51 Physis **3.**

Skeletal anomalies, VIEHMEYER Ent. Mitt. **6** pp. 66–72.

Stem-infesting ants, STÄGER Rev. suisse Zool. **25** p. 95–109.

Embryology, STRINDBERG Zool. Anz. **49** p. 177–197.

Acantholepis frauenfeldi var. n. *melas*, EMERY Boll. Mus. Torino **30** No. 701 p. 3, 1915.

Acromyrmex lobicornis var. *pencosensis* nest p. 314 figs., BRUCH An. Soc. Argent. **83.**

Aenictus congolensis, worker and female, SANTSCHI p. 277 pl. i Ann. Soc. ent. France **85.**

Anergates, larval hairs, CRAWLEY p. xci pl. A Pr. ent. Soc. Lond. **1916.**

Aphaenogaster splendida festae subsp. n., EMERY Boll. Mus. Torino **30** No. 701 p. 2, 1915.

Atta vollenweideri, nesting p. 154–161 figs., BRUCH An. Soc. Argent. **83.**

Brachymyrmex gaucho sp. n. Cordoba p. 283, SANTSCHI An. Soc. Argent. **83.**

Brunella gen. n. for *Aphaenogaster belti*, FOREL p. 234 Bull. Soc. Vaud. **51** p. 235.

Calyptomyrmex arnoldi For. p. 360 pl. viii figs. 114, ARNOLD Ann. S. Afric. Mus. **14.**

Camponotus maculatus hieroglyphicus st. n. p. 290, var. n. *contaminatus* p. 291, var. n. *diffusus* p. 292, *C.* (*Colobopsis*) *bifossus* sp. n. Cape G. H. p. 293, SANTSCHI Ann. Soc. ent. France **85.**—*C. distinguendus tenuipubens* n. n. for *denudata* Em., SANTSCHI p. 242 Bull. Soc. ent. France **1916.**—*C. libanicus* var. n. *aegea* p. 4 figs., *stenotica* n. n. for *angustata* For. p. 7, *C. boghossiaxi*, EMERY Boll. Mus. Torino **30** No. 701 1915.—*C. cylindricus* F. = (*doriae* Mayr), EMERY p. 97 Bull. Soc. ent, France **1917.**—*C. punctulatus* var. *imberbis* nest p. 165 figs., BRUCH An. Soc. Argent. **83.**

Cataulacus erinaceus var. n. *crassispina, intrudens intermedius* st. n., p. 287, SANTSCHI Ann. Soc. ent. France **85.**—*C. baumi* var. *batonga* p. 289 pl. viii figs. 119, ARNOLD Ann. S. Afric. Mus. **14.**

Cremastogaster (*Oxyggnes*) *scelerata* p. 279 sp. n. Argentina, SANTSCHI An. Soc. Argent. **83.**—*C. ancipitula* sp. n (?) = (*wellmani* ♀ For.), FOREL p. 252 Bull. Soc. Vaud. **51.**—*C. neuvillei carininotum* st. n. p. 279, *inconspicua incorrecta* st. n. p. 280, *nigronitens* sp. n. Rhodesia p. 281, SANTSCHI Ann. Soc. ent. France **85.**

Cryptocerus ridiculus, ♀, BRUCH p. 269 figs. Physis **3.**

Cyphomyrmex bruchi sp. n. p. 282 La Plata, SANTSCHI An. Soc. Argent. **83.**

Dolichoderus (*Hypoclinea*) *crawleyi* sp. n. Singapore p. 201, DONISTHORPE Ent. Rec. **29.**—*D. bituberculatus*, Biologie, VAN DER GOOT Salatiga, Meded. Proefst. **25** p. 1-142.

Dorymyrmex santschii sp. n. = (*Pyramicus garbei* Gall.), GALLARDO p. 50 fig. Physis **3.**—*D. mucronatus* var. n. *joergenseni* p. 431 fig., BRUCH Physis **3.**

Formica gaullei sp. n. Europe p. 176 fig., BONDROIT Bull. Soc. ent. France **1917.**—*F. lemani, gerardi*, p. 186, *tombeuri* p. 187, spp. n. Europe, BONDROIT Bull. Soc. ent. France **1917.**—*F. rufa*, natural history notes, SEWELL Naturalist 1917 p. 158, 159.

Formicina and *Lasius*, EMERY p. 95 Bull. Soc. ent. France **1917.**—*F. rabaudi* sp. n. France, *umbrata* var. n. *nuda* p. 177 figs., BONDROIT Bull. Soc. ent. France **1917.**

Isolcomyrmex subg. n. for *Monomorium santschii*, SANTSCHI p. 296 Ann. Soc. ent. France **85.**

Lasius or *Acanthomyops*, subgenera, synonymy, Morice and DURRANT p. 442 Tr. ent. Soc. London **1916.**

Lasius subumbratus, parasitic habits, WHEELER Psyche **24** p. 167-176.

Leptogenys attenuata var. = (*jaegerskioeldi* S.), SANTSCHI p. 279 Ann. Soc. ent. France **85.**

Leptothorax tuberum var. n. *staegeri* p. 251, FOREL Bull. Soc. Vaud. **51.**—*L. pulcher* n. n. for *formosus* Em., EMERY p. 96 Bull. Soc. ent. France **1917.**

Meranoplus spininodis sp. n. p. 366, *simoni*, var. *springvalensis* var. n. p. 372, ARNOLD Ann. S. Afric. Mus. **14.**

Monomorium australe, forms, synonymy, SANTSCHI p. 282 Ann. Soc. Ent. France **85.**—*M. pharaonis*, in S. Africa, WASMANN & BRAUNS p. 184-186 Ent. Mitt. **6.**—*M.* sp. notes, ADAIR pp. 56-62 Bull. Soc. ent. Egypte **7.**

Myrmecorhynchus, position, WHEELER Trans. R. Soc. S. Austral. **41** p. 14-19.

Myrmica brevinodis var. n. *kuschei* p. 17, WHEELER Bull. Mus. Harvard **61.**

Myrmicaria nitida fumata n.n. for *brunnea* S., SANTSCHI p. 242 Bull. Soc. ent. France **1916.**

Oligomyrmex (*Aeromyrma*) *lucidus* sp. n. Rhodesia p. 285, SANTSCHI Ann. Soc. ent. France **85.**

Onychomyrmex, characters larva, *O. doddi* sp. n. Queensland p. 53, WHEELER Bull. Mus. Harvard **60** 1916.

Pheidole nyassae var. *legitima* n.n. for *sculptior* Viehm., *exasperata* var. *concordia* n.n. for *polita* Viehm., SANTSCHI p. 242 Bull. Soc. ent. France **1916.**—*P. megacephala*, varieties, allies, figs., var. n. *orientalis* p. 227, EMERY Rev. Zool. Afric. **4** 1916 pp. 223-250.—*P. obtusopilosa*, ♂; SANTSCHI p. 278 An. Soc. Argent. **83.**—*P. megacephala*, ravages, ILLINGWORTH P. Hawai. ent. Soc. **3** p. 349-368.

Plagiolepix (*Anoplolepis*) *nuptialis*, *rufescens*, **spp. n.** S. Africa p. 289, SANTSCHI Ann. Soc. ent. France **85.**

Pogonomyrmex brevibarbis, *longiceps* st. n, p. 277, SANTSCHI An. Soc. Argent. **83.**—*P. coarctatus* p. 303-308, nest, &c., figs. BRUCH An. Soc. Argent. **83.**

Polyrhachis (*Myrma*) *gamaii* **sp. n.** Natal p. 295, SANTSCHI Ann. Soc. ent. France **85.**—*P. revoili* var. n. *donisthorpei* p. 252, FOREL Bull. Soc. Vaud. **51.**—*P. hostilis circumflexa* n.n. for *arcuata* Stitz, *h. crawleyella* n.n. for *comata* Cr., *variolosa arcispina* n.n. for *curvispina* Stitz, SANTSCHI p. 243 Bull. Soc. ent. France **1916.**

†*Ponera rhenana* **sp. n.** Aquitanien, Allemagne, MEUNIER, Amsterdam, Verh. Ak. 2e Sect. **20** p. 8.

Prenolepis and *Atta*, IHERING Physis **3** pp. 353-360.

Prenolepis mjoebergella n.n. for *mjoebergi* F., FOREL p. 242 Bull. Soc. ent. France **1916.**

Prodiscothyrea bryanti **sp. n.** Penang p. 29, WHEELER Psyche **24.**

Rhoptromyrmex transversinodis, Mayr. p. 355 pl. viii. figs. 112-113, ARNOLD Ann. S. Afric. Mus. **14.**

Sima or *Tetraponera* p. 94, type of *Sima* p. 95, EMERY Bull. Soc. ent. France **1917.**

Solenopsis macrops **sp. n.** p. 280, *tetracantha* p. 281, Argentina, SANTSCHI An. Soc. Argent. **83.**—*S. saevissima* var. *tricuspis* nest pp. 162-164, figs., BRUCH T.c.

Strumigenys arnoldi For. p. 376 pl. viii figs. 117, *escherichi* race *limbata* p. 381 fig. 118, ARNOLD Ann. S. Afric. Mus. **14.**

Tapinoma tenue var. n. *tectum*, *gracile* var. n. *lugubre*, p. 288, SANTSCHI Ann. Soc. ent. France **85.**

Tetramorium constanciae p. 339 pl. vii figs. 94 94A, *hepburni* p. 340, *semireticulatum* p. 319, *simulator* p. 297 pl. vii f. 102, **spp. n.**, *squaminode* var. *flaviceps* p. 316, *auropunctatum* var. *bulawayensis* p. 335, *seuliferum* var. *triptolemus* p. 292, *squaminode* var. *flaviceps* p. 316 **var. n.**; *decem* p. 349 pl. viii fig. 111, *grassi* p. 304 pl. vii f. 105, *fossulatum* p. 348 pl. vii f. 107, 108, *jauresi* p. 296 pl. vii f. 99, *joffrei* p. 303 pl. vii f. 97, *setuliferum* p. 289 pl. vii figs 101, *signatum* p. 289 pl. vii fig. 104, *hopensis* p. 313 pl. vii fig. 103; ARNOLD Ann. S. Afric. Mus. **14.**—*T. bequaerti bruni* st. n., *pusillum* var. n. *tristis*, SANTSCHI p. 285 Ann. Soc. ent. France **85.**—*T. caespitum* var. n. *rhodia*, EMERY Boll. Mus. Torino **30** No. 701 p. 3 1915.

Tetramyrma braunsi p. 358 pl. vii f. 86, ARNOLD Ann. S. Afric. Mus. **14.**

Trachymyrmex pruinosus nest pp. 308-313 figs., BRUCH An. Soc. Argent. **83.**

Triglyphothrix pauper **sp. n.** Rhodesia p. 286, SANTSCHI Ann. Soc. ent. France **85.**

Veromessor **subg. n.** for part of *Novomessor*, FOREL p. 235 Bull. Soc. Vaud. **51.**

Vollenhovia ambigua n.n. for *brevicornis* Em., SANTSCHI p. 242 Bull. Soc. ent. France **1916.**—*V. brachycera* Em. = (*ambigua* Santschi), EMERY p. 96 Bull. Soc. ent. France **1917.**

Xenometra monilicornis n. n. for *Cardiocondyla emeryi* Em., EMERY p. 96 T.c.

CHRYSIDIDAE.

Chrysis (*Gonochrysis*) *chakouri* **sp. n.**, Egypt p. 43, *leachi* var. n. *cyanea* p. 49, *C. blanchardi* var. n. *rubescens* p. 59, *C. teilhardi* **sp. n.** Egypt p. 79, DU BUYSSON Mem. Soc. ent. Egypte **1** 1908.—*C. pandianii* **sp. n.** Guinea p. 30, *griffinii* n. n. for *auromaculata* Mocs. p. 32, MANTERO Ann. Mus. Doria **47** 1916.

Hedychridium ahenaeneum var. n. *virescens*, DU BUYSSON p. 23 Mem. Soc. ent. Egypte **1.**

ICHNEUMONIDAE.

Bignall's types, HODGSON Rep. Trans. Devon Ass. **49** pp. 397–415.

Ichneumonidae and forestry, BORDAS C. R. Ac. Paris **164** p. 235 etc.

New varieties of *Chasmias*, *Ichneumon* and *Amblyteles*, PIC Hibernage des Ichneumoniens p. 4 (in Echange No. 379).

Acanthocryptus obtusus p. 20, *hannibal* p. 21, **spp. n.** Tunis, SMITS VAN BURGST Tunisian Hymenoptera 1913.

Aenoplex nigrosoma **sp. n.** Washington p. 460, CUSHMAN P. U. S. nat. Mus. **53.**

Aethecerus puniceus **sp. n.** Tunis, SMITS VAN BURGST Tunisian Hymenoptera p. 16 1913.

Aglaocryptus glabratus p. 211 **sp. n.**, MORLEY Ann. S. Afric. Mus. **17.**

Aglaojoppa rubrithorax p. 196 **sp. n.**, MORLEY T.c.

Allocamptus crassellus p. 222 **sp. n.**, MORLEY T.c.

Angitia milleri p. 159, *tineavora* p. 160, **spp. n.** Oregon, ROHWER P. U. S. Nat. Mus. **53.**

Anilastus schmiedeknechti **sp. n.** Tunis, SMITS VAN BURGST Tunisian Hymenoptera p. 33 1913.

Argiotypus, new Japanese aquatic, OTA Dobuts. Z. Tokyo **29** p. 281–285.

Asphragis rubricosa p. 218 **sp. n.**, MORLEY Ann. S. Afric. Mus. **17.**

Bathythrix tibialis **sp. n.** Washington p. 458, CUSHMAN P. U. S. nat. Mus. **53.**

Boethus schizoceri = (*howardi* Dav. = *daeckei* Vier.), ROHWER p. 162 P. U. S. nat. Mus. **53.**

Caenocryptus newcomeri **sp. n.** Washington p. 463, CUSHMAN P. U. S. nat. Mus. **53.**

Canidia carthaginiensis **sp. n.** Tunis SMITS VAN BURGST Tunisian Hymenoptera p. 31 1913.

Casinaria australis **sp. n.** Tunis, SMITS VAN BURGST T.c. p. 30 1913.

Chaeretymna minuta **sp. n.** Washington p. 465, CUSHMAN P. U. S. nat. Mus. **53.**

Charitojoppa thoracica p. 200 **sp. n.**, MORLEY Ann. S. Afric. Mus. **17.**

Chasmias motatorius varr.n. *atronotatus* and *rufonotatus*, PIC p. 3 Micell. ent. **24.**

Coelichneumon petiolaris p. 197 **sp. n.**, MORLEY Ann. S. Afric. Mus. **17.**

Cremastus cypete p. 225 **sp. n.**, MORLEY T.c.—*C. longigenalis* p. 516, *longiventris* p. 517, *ruficeps* p. 518, *gracilis* p. 519, *gracilipes* p. 520, *flaviceps* p. 521, *graciliventris* p. 522, *minor* p. 523, *brevipetiolus* p. 525, *platynotae* p. 526, *tortricidis*, *brevicauda* p. 528, *evetriae* p. 530, *epagoges* p. 531, *C.* (*Zaleptopygus*) *rostratus* p. 532, *cleridivorus* p. 534, *similis*, *plesius*, p. 535, *rosae* p. 536, *tetralophae* p. 537, *terebratus*, *mordellistenae* p. 539, *rohweri* p. 541, *anomalus* p. 542, *nigriclypealis* p. 543, *bilineatus* p. 545, *gallaecola* p. 546, **spp. n.** U. S., CUSHMAN P. U. S. nat. Mus. **53.**

Cryptus horsti **sp. n.** Chile p. 83, BRÈTHES Revist. chilena **20** 1916.—*C. koebelei* n. n. for *ferrugineus* Ashm., ROHWER p. 158 P. U. S. nat. Mus. **53.**

Ctenichneumon melanocastanus var. *borealis* var. n. Sweden, ROMAN Ent. Tidskr. **38** p. 264.

Cyanocryptus fulgidus **sp. n.** Patagonia p. 193, BRUES Psyche **24.**

Dolichoselephus; defined, CUSHMAN p. 508 P. U. S. nat. Mus. **53.**

Earrana rectinervis p. 210, MORLEY Ann. S. Afric. Mus. **17.**

Ecthropsis **gen. n.** near *Echthrus*, *porteri* **sp. n.** Chile, BRÈTHES p. 86 Revist. chilena **20** 1916.

Eiphosoma luteum p. 450, *jamaicense* p. 451, *haitiense* p. 453, **spp. n.**, Antilles BRUES Ent. News **28.**

Enicospilus (*Dispilus*) *bonaberiensis* **sp. n.** Africa p. 42, STRAND Ent. Mitt. **6.**

Epiurus semidilutus p. 214 **sp. n.**, MORLEY Ann. S. Afric. Mus. **17.**—*E. geniculatus* var. *suecicus* var. n. Sweden, ROMAN Ent. Tidskrift **38** p. 270.

Eupalamus cariniscrobes p. 199 **sp. n.**, MORLEY Ann. S. Afric. Mus. **17.**

Exolytus rufiventris p. 26, *opulentus* p. 27, **spp. n.**, SMITS VAN BURGST Tunisian Hymenoptera 1913.

Glypta mauritanica **sp. n.** Tunis, SMITS VAN BURGST Tunisian Hymenoptera p. 27 1913.—*G. evetriae* **sp. n.** Oregon p. 469, CUSHMAN P. U. S. nat. Mus. **53.**

Gonolochus sulcatus **sp. n.** Tunis, SMITS VAN BURGST Tunisian Hymenoptera p. 35 1913.

Goryphus aello p. 208, *celaens* p. 207, *cinctitibia* p. 206, *corniger* p. 206, *lobatus* p. 206, *testaceus* p. 207, **spp. n.**, MORLEY Ann. S. Afric. Mus. **17.**

Hemipimpla divisa Tosq. ♂ p. 215, *terebrata* p. 215 **sp. n.**, MORLEY T.c.

Hemiteles melanocephalus p. 23, *nigricans* p. 24, *elongatus* p. 25, *lamelliger* p. 26, **spp. n.**, SMITS VAN BURGST Tunisian Hymenoptera 1913.

Hoplocryptus tarsatus **sp. n.** Tunis, SMITS VAN BURGST T.c. p. 18 1913.

Ichneumon romani **sp. n.** Tunis, SMITS VAN BURGST T.c. p. 14 1913.

Ischnojoppa visibilis p. 194 **sp. n.**, MORLEY T.c.

Itoplectis obesus **sp. n.** Washington p. 467, CUSHMAN P. U. S. nat. Mus. **53.**

Leptophatnus bucephalus **sp. n.** p. 194, MORLEY Ann. S. Afric. Mus. **17.**

Macrogrotea **gen. n.** p. 84, for *Pimpla gayi* Spin., BRÈTHES Revist. chilena **20** 1916.

Meleborus laspeyresiae **sp. n.** Oregon p. 161, ROHWER P. U. S. nat. Mus. **53.**

Mesoleius affinis **sp. n.** Tunis, SMITS VAN BURGST Tunisian Hymenoptera p. 36, 1913.—*M. tenthredinis*, HEWITT p. 355 Agric. Gaz. Canada **4.**

Mesostenus denticlypeus p. 208, *octans* p. 209, **spp. n.**, MORLEY Ann. S. Afric. Mus. **17.**

Microcryptus oculatus PROV., CUSHMAN p. 457 P. U S. nat. Mus. **53.**

Moansa maculipes Cam. ♂, MORLEY Ann. S. Afric. Mus. **17.**

Nemeritis arianensis **sp. n.** Tunis, SMITS VAN BURGST Tunisian Hymenoptera p. 32, 1913.

Neocremastus **gen. n.** p. 509 type *Porizon stigmaterus* Cr., CUSHMAN P. U. S. nat. Mus. **53.**

Neotypus conflatus p. 198 ♂, MORLEY Ann. S. Afric. Mus. **17.**

Nepiera benevola var. n. *fuscifemora* p. 208, GAHAN P. U. S. nat. Mus. **53.**

Odontomerus strangaliae **sp. n.** Virginia p. 158, ROHWER P. U. S. nat. Mus. **53.**

Omorga longiceps Cam. ♂, MORLEY p. 227 Ann. S. Afric. Mus. **17.**

Phaedroctonus argyresthiae **sp. n.** Oregon p. 162, ROHWER P. U. S. nat. Mus. **53.**

Pimpla pubens p. 214 **sp. n.**, MORLEY Ann. S. Afric. Mus. **17.**

Platylabus ceta p. 203, *hemerythraeus* p. 202, *lucifer* p. 203, *phorcys* p. 202, *testaceus* p. 204, **spp. n.**, MORLEY T.c.

Porizon platensis **sp. n.** Buenos Aires, BRÈTHES p. 90, FRERS p. 89 Physis. **3.**

Pristomeridia albescens p. 224 **sp. n.**, MORLEY Ann. S. Afric. Mus. **17.**

Procinetus fasciatus **sp. n.**, Tunis, SMITS VAN BURGST Tunisian Hymenoptera p. 28 1913.

Pseuderipternus brevicauda p. 506, *gracilipes* p. 507, **spp. n.** U. S., CUSHMAN P. U. S. Nat. Mus. **53.**

Pyracmon conocola **sp. n.** California p. 159, ROHWER P. U. S. nat. Mus. **53.**

Scambus ephialtoides **sp. n.** Oregon p. 466, CUSHMAN P. U. S. nat. Mus. **53.**

Scolobates auriculatus var. *niger* var. n. Sweden, ROMAN Ent. Tidskr. **38** p. 273.

Skiapus **gen. n.** p. 220 fig, *Skiapodes* Trib. nov. p. 219, *coalescens* p. 221 **sp. n.**, MORLEY Ann. S. Afric. Mus. **17.**

Spilocryptus polychrosidis **sp. n.** Pennsylvania, CUSHMAN p. 461 P. U. S. nat. Mus. **53.**

Synetaeris tacnaensis **sp. n.** Chile p. 87, BRÈTHES Revist. chilena **20** 1916.

Tegona discreta p. 218 **sp. n.**, MORLEY Ann. S. Afric. Mus. **17.**

Thersilochus coeliodicola **sp. n.** Italy p. 170 fig., SILVESTRI Boll. Lab. Portici **12.**

Xanthocampoplex flavescens p. 226 **sp. n.**, MORLEY Ann. S. Afric. Mus. **17.**

Xanthojoppa inermis p. 196 **sp. n.**, MORLEY T.c.

Xanthopimpla renovata **n. n.** for *appendiculata* Cam., MORLEY T.c.

BRACONIDAE.

Braconid parasites of *Olethreutes*, SAVRA pp. 184–186 Boll. Lab. Portici **12.**

Cocoons, etc., LYLE p. 194 figs. Entomol. **50.**

Aleirhogas **subg. n.** vide *Rhogas.* Baker

Apanteles parallelus p. 195, *lucifugus* p. 197, *pinicola* p. 199, **spp. n.** England, LYLE Entomol. **50.**—*A. diacrisiae* **sp. n.** Columbia p. 198, GAHAN P. U. S. nat. Mus. **53.**—*A. riverae* **sp. n.** Chile p. 96 pl. vi, PORTER Revist. chilena **20** 1916.

Aphrastobracon philippinensis **sp. n.** p. 213, BAKER Philipp. J. Sci. D. **12.**

Bathyaulax plumosus Kirby (as *Bracon*) = (*cristatus* Sz.), TURNER p. 242 Ann. Nat. hist. **20.**

Bracon glossonae p. 318, *comstocki* p. 323, *montrealensis* p. 326, *kelloggi* p. 327, *ashmeadi* p. 329, *californicus* p. 331, *nigrosternum* p. 332, *szepligetii* p. 334, *virginiensis* p. 341. **spp. n.** Am. bor. MORRISON P. U. S. Nat. Mus. **52.**—*B. discoideus*, notes on, parasite of *Anthonomus*, SMITS VAN BURGST Ber. Ned. Ent. Ver. **5** p. 1-3.—*B. hylobii* ? larva, etc., MUNRO Proc. R. Soc. Edinburgh **36** 1916 p. 313-333, figs.—*B.* sp., parasite of *Earias insulana*, WILLCOCKS p. 56-57 Bull. Soc. ent. Egypte **6.**

Braconinae n. n. for *Agathidinae* auctt., GAHAN p. 197 P. U. S. Nat. Mus. **53.**

Chelonus phthorimaeae **sp. n.** Colorado p. 199, GAHAN T.c.

Coelalysia glossinophaga **sp. n.** Africa p. 177, TURNER Bull. ent. Res. **8.**

Coelothorax frersi **sp. n.** Argentina, BRÈTHES p. 90 and FRERS p. 89 Physis **3.**

Colastomion **gen. n.** *Rhogadinae* p. 290, *abdominalis* **sp. n.** Luzon p. 291, BAKER Philipp. J. Sci. D. **12.**

Cosmophorus pityophthori **sp. n.** California p. 163, ROHWER P. U. S. Nat. Mus. **53.**

Cratobracon = (*Hybrothorax* Sz.), TURNER p. 242 Ann. Nat. hist. **20.**

Diospilus washingtonensis p. 163, *californicus* p. 164, *neoclyti* p. 165, **spp. n.** U. S., ROHWER P. U. S. Nat. Mus. **53.**

Ephedrus nitidus **sp. n.** New Jersey p. 195, GAHAN P. U. S. Nat. Mus. **53.**

Gyrocampa thomsoni nom. n., ROMAN Ark. Zool. **11** No. 7. p. 7.

Gyroneurella **gen. n.** p. 320, *kikujewii* **sp. n.** Luzon p. 321, BAKER Philipp. J. Sci. D **12.**

Hemigyroneuron **gen. n.** p. 322, *speciosus* p. 323, *suffusus* p. 325, **spp. n.** Philippines, BAKER T.c.

Heterogamus longicollis **sp. n.** Luzon p. 288, BAKER T.c.

Iphiaulax rubriceps p. 564, *phoracanthae* p. 565, *morleyi* p. 566, **spp. n.** Australia, FROGGATT Agric. Gaz. N. S. W. **1916.**—*I. fastidiator* Fabr. = (*corallinus* Rits.) p. 242, *plurimacula* Br. = (*coccineomaculatus* Cam.), *permutans* **sp. n.** Africa, p. 243, *grenadensis* Ashm. = (*harperi*, *medianus*, *villosus*, Cam.) p. 244, TURNER Ann. Nat. hist. **20.**

Ipobracon insidiator = (*speciosissimus* Sz.), TURNER p. 242 T.c.

Macroneura urichii **sp. n.** Trinidad p. 166, ROHWER P. U. S. Nat. Mus. **53.**

Macrostomion debilis **sp. n.** Luzon p. 292, BAKER Phillpp. J. Sci. D. **12.**

Macrostomoniella **gen. n.** p. 294 *philippinensis* p. 296, *similis* p. 297, **spp. n.**, Luzon, BAKER T.c.

Megarhogas stigmaticus p. 299, *philippinensis* p. 301, *mindanaensis* p. 303, *szeplegetii* p. 306, **spp. n.**, Philippines, BAKER T. c.

Mesobracon maculiceps Cam. (as *Telerda*) = (*concolor* Szep.). TURNER Ann. Nat. hist. **20.**

Microbracon sanninoideae **sp. n.** Maryland p. 196, GAHAN P. U. S. Nat. Mus. **53.**

Microgaster epagoges **sp. n.** Tennessee p. 197, GAHAN T.c.

Neopius **gen. n.** p. 203, *carinaticeps* **sp. n.** Dakota p. 204, GAHAN T.c.

Neorhyssalus **gen. n.** p. 286, *compositus* **sp. n.** Luzon p. 287, BAKER Philipp. J. Sci. D. **12.**

Odontobracon oemeovorus p. 167, *elaphidiovorus* p. 168, *californicus* p. 169, **spp. n.**, U. S., ROHWER P. U. S. Nat. Mus. **53.**

Opius pegomyiae, coriaceus, p. 201, *otiosus* p. 202, **spp.** n. U. S., GAHAN P. U. S. Nat. Mus. **53.**

Paragyroneuron, **gen. n.** p. 318, *bicolor* **sp. n.** Luzon p. 319, BAKER Philipp. J. Sci. D. **12.**

Phanerotoma leeuwinensis **sp. n.** Australia p. 247, TURNER Ann. Nat. hist. **20.**—*P. erythrocephala* **sp. n.** Colorado p. 166, ROHWER P. U. S. Nat. Mus. **53.**—*P. franklini* **sp. n.** Massachusetts p. 200, GAHAN P. U. S. Nat. Mus. **53.**

Praon ; cocoon construction, AINSLIE pp. 364-367 Ent. News **28.**

Pseudogyroneuron **gen. n.**, *mindanaensis* **sp. n.** BAKER p. 316 Philipp. J. Sci. D. **12.**

Rhizarcha confinis var. faeroeënsis var. n. Faroe-Islands, ROMAN Ark. Zool. **11** No. 7 p. 6.

Rhogas kitcheneri **sp. n.** Egypt p. 140, DUDGEON & GOUGH Bull. Soc. ent. Egypte **1912**, 1914.—*R.* (*Aleiodes*) *cameroni* p. 385, *palavanicus* p. 387, *benguetensis* p. 389, *lateralis* p. 391, *subquadratus* p. 393, *bicolor* p. 395, *minicus* p. 397, *simillimus* p. 398, *modestus* p. 400, *separatus* p. 402, *banksi* p 403, *R.* (*R.*) *brownii* p. 405, *sanchezi* p. 408, *luzonensis* p. 410, *R.* (*Aleirhogas* subg. n. p. 411), *ferruginosus* p. 412, *montanus* p. 414, *exceptus* p. 416, *oculatus* p. 418, *schultzei* p. 420, **spp. n.**, Philippines, BAKER Philipp. J. Sci. D **12.**—*R. perplexus* p. 205, *politiceps* p. 206, *rufocoxalis* p. 207, **spp. n.**, U. S., GAHAN P. U. S. Nat. Mus. **53.**—*R. terminalis*, life history and habits, PENNINGTON J. Econ. Ent. **9** 1916 p. 401-406 pl. 30 f. 24.

Rhogasella **gen. n.** p. 311, *straminea* p. 312, *lineata* p. 314, **spp. n.** Philippines, BAKER Philipp. J. Sci. D. **12.**

Rhyssalus ashmeadii **sp. n.** Luzon p. 285, BAKER T.c.

Sphaeropyx conjugator Australia p. 245, *neavei* Africa p. 246, **spp. n.**, TURNER Ann. Nat. hist. **20.**

Spinaria aliciae **sp. n.** Queensland p. 244, TURNER T.c.

Sycosoter **gen. n.**, *lavagnei* **sp. n.** Montpellier, PICARD and LICHTENSTEIN p. 285 Bull. Soc. ent. Fr. **1917.**—*S. lavagnei*, structure and natural history, LICHTENSTEIN and PICARD Bull. biol. **51** pp. 440-474.

Trichiobracon Cam. = (*Trichodoryctes* Sz.), *striolatus* Sz. (as *Acanthobracon*) = (*pilosus* Cam. = *Neotrimorus luteus* Cam.), TURNER p. 245 Ann. Nat. hist. **20.**

Trigonophatnus nigricornis p. 308, *philippinensis* p. 309, **spp. n.**, BAKER Philipp. J. Sci. D. **12.**

Vipiinae n. n. for *Braconinae* auctt., GAHAN p. 196 P. U. S. Nat. Mus. **53.**

Wesmaelia americana **sp. n.** Maryland p. 293, MYERS P. U. S. Nat. Mus. **53.**

EVANIIDAE.

Aulacinus amazonicus **sp. n.** Brazil, ROMAN Ark. Zool. **11** No. 4 p. 16.

Brachygaster (*Semacomyia*) *amazonica* **sp. n.** Brazil, ROMAN p. 23 T.c.

†*Electrofoenus* **gen. n.** p. 364, *gracilipes* **sp. n.** Burmese amber p. 365, COCKERELL Amer. J. Sci. **44.**

Evania laevigata and *abyssinica*, host, ALFIERI p. 14 Bull. Soc. ent. Egypte **6.**

Evaniella huebneri **sp. n.** Brazil, ROMAN Ark. Zoal. **11** No. 4 p. 20.

Evaniscus sulcigenis **sp. n.** Brazil, ROMAN p. 21 T.c.

†*Hyptiogastrites* **gen. n.** p. 19, *electrina* **sp. n.** Burma in amber p. 20, fig., COCKERELL Ann. ent. Soc. Amer. **10.**

Pristaulacus strangaliae **sp. n.** Pennsylvania p. 157, ROHWER P. U. S. Nat. Mus. **53.**—*P. zonatipennis* **sp. n.** Brazil, ROMAN Ark. Zool. **11** No. 4 p. 18.

†*Protofoenus* **gen. n.**, *swinhoei* **sp. n.** burmese amber, COCKERELL p. 19 Ann. ent. Soc. Amer. **10.**

STEPHANIDAE.

Diastephanus tertianus p. 108, *alutaceus*, Africa, *frontilinea* Assam, p. 109, **spp. n.**, MORLEY Entomol. **50.**—*D. flavifrons* Borneo, *flaviceps* hab. ? **spp. n.** p. 131, ELLIOTT Entomol. **50.**

Parastephanellus eburneus **sp. n.** Kandy p. 35, MORLEY Entomol. **50.**—*P. laevicollis* **sp. n.** Ding-ding isld. p. 111, MORLEY T.c.—*P. rubripictus* **sp. n.** Borneo, etc., p. 129, ELLIOTT Entomol. **50.**

Stephanus ; the subgenera, ELLIOTT p. 130 Entomol. **50.**—*S. comma* Ashanti p. 105, *crassicauda* Australia p. 106,

rubripes Solomon islds. p. 107, **spp. n.**, MORLEY Entomol. **50.**—*S. tortus* **sp. n.** India p. 34, MORLEY T.c.—*S. metallicus* W., to *Foenatopus*, M. p. 110 t.c.—*S. angulicollis* p. 7 fig. 3, *glabricoxis* p. 9 fig. 4, **spp. n.** Brazil ROMAN Ark. Zool. **11** No. 4.—*S. damellicus*, ELLIOTT p. 266 Ent. **50.**

TRIGONALIDAE.

†*Trigonalys pervetus* **sp. n.** Burmese amber p. 79, COCKERELL P. biol. Soc. Washington **30.**

RHOPALOSOMIDAE.

Vide *Olixon* in *Proctotrypidae.*

CHALCIDIDAE, MYMARIDAE.

Parasites of ootheca, RABAUD p. 178, Bull. Soc. ent. France **1917.**

Abella americana **sp. n.** Utah p. 445, GIRAULT P. U. S. Nat. Mus. **53.**

Ablerus emersoni p. 30, *impunctatipennis* p. 31, **spp. n.** W. Australia, GIRAULT Insec. inscit. **5.**—*A. clisiocampae*, host, PORTER p. 186 Ent. News **28.**

Acanthentedon **gen. n.** near *Uracrias*, *laticeps* **sp. n.** Queensland, DODD S. Aust. Trans. R. Soc. S. Austr. **41** pp. 363–364.

Aceratoneuromyia **gen. n.** *australia* **sp. n.** p. 151, GIRAULT Insec. inscit. **5.**

Achrysocharella pulchrella **sp. n.** Columbia p. 94, GIRAULT Psyche **24.**—*A. albitibiae* **sp. n.** St. Vincent p. 356, GIRAULT Canad. Ent. **49.**

Achrysocharis cardigaster **sp. n.** Seychelles p. 211, fig., MASI Nov. Zool. **24.**—*A. divina* **sp. n.** Maryland p. 22, GIRAULT Ent. News **28.**

Aenasiella australia **sp. n.** N.S.W. p. 35, GIRAULT Insec. inscit. **5.**

Aethognathus afer var. n. *cavilabris* p. 313 fig., WATERSTON Bull. ent. Res. **7.**

Agaonini of Java, details of structure, figs., GRANDI pp. 3–60 Bull. Lab. Portici **12.**

Allomphale = (*Secodella* G.), GIRAULT p. 37 Insec. inscit. **5.**—*A. aemula* **sp. n.** Seychelles p. 210, MASI Nov. Zool. **24.**

Allotriozoon seychellense **sp. n.** p. 123 figs., MASI T.c.

Amiscogaster **gen. n.** *Halticopterini* p. 144, *ruskini* **sp. n.** N.S.W., GIRAULT Insec. inscit. **5.**

Anacryptus insidiosus **sp. n.** Seychelles p. 129, MASI Nov. Zool. **24.**

Anagrus porteri **sp. n.** Chile p. 82 pl. viii, BRÈTHES Revist. chilena **21.**

Anagyropsis **gen. n.** for *Anagyrus purpureus*, GIRAULT p. 136 Insec. inscit. **5.**

Anagyrus ? chilensis **sp. n.** p. 8, BRÈTHES Revist. chilena **20** 1916.

CR *Ananusia* **n. n.** for *Paranusia* G., GIRAULT p. 155 Insec. inscit. **5.**

Aneristus croconotus **sp. n.** Gold coast p. 234 figs., WATERSTON Bull. ent. Res. **7.**

Anthemus chionaspidis hilli var. n. Northern Territory, DODD Trans. R. Soc. S. Aust. **41** p. 352.

Anthrocephalus mahensis **sp. n.** p. 133, fig., MASI Nov. Zool. **24.**

Aphelinus ciliatus **sp. n.** Northern Territory, DODD Trans. R. Soc. S. Aust. **41** p. 353.

Aphycus pinicola p. 135, *A.* (*Metaphycus* subg. n.) *zebratus* p. 138, **spp. n.** Spain, MERCET Bol. Soc. espan. **17.**—*A. coccidiphagus* **sp. n.** Australia p. 134, GIRAULT Insec. inscit. **5.**

Aplastomorpha pratti = (*australiensis* G. = *Meraphorus vandinei* T. = *Neocatolaccus vandinei* T.), p. 152, GIRAULT T.c.

Aprostocetus marilandicus **sp. n.** p. 21, GIRAULT Ent. News **28.**

Apterotrix dubia **sp. n.** Australia p. 94, GIRAULT Insec. inscit. **5.**

Aspidiotiphagus and *Prospaltella* pp. 1–13, *A. citrinus* var. n. *agilior* p. 5, BERLESE Redia **12.**—*A. citrinus*, food-habits, MALENOTTI T.c. pp. 15–18.

Astichus bimaculatipennis to *Sympiesis*, GIRAULT p. 449 P. U. S. Nat. Mus. **53.**

Asympiesella superbus to *Sympiesis*, GIRAULT p. 155 Insec. inscit. **5.**

Aximopsis elegans **sp. n.** Seychelles p. 140, MASI Nov. Zool. **24.**

Bardylis australicus **sp. n.** p. 94, GIRAULT Insec. inscit. **5.**

Bavanusia margiscutellum **sp. n.** Australia p. 141, GIRAULT T.c.

Blastophaga allotriozonoides, GRANDI pp. 4–15, figs. Bull. Soc. ent. ital. **48.**

Blastothrix sp. cf. *insolitus* p. 150 fig., MASI Nov. Zool. **24.**—*B. bohemani*, to *Epidinocarsis*, GIRAULT p. 36 Entomol. **50.**

Blattotetrastichus **gen. n.** for *Entedon hagenowi*, GIRAULT p. 257 Ent. News **28.**

Bruchobius medius **sp. n.** Seychelles p. 176, MASI Nov. Zool. **24.**

Callimomus chilensis **sp. n.** p. 88, BRÈTHES Revist. chilena **20** 1916.

Calosoter silvai **sp. n.** Chile p. 26, BRÈTHES An. Zool. aplic. **1.**

Carlylcia **gen. n.** *Omphalini, marilandica* **sp. n.** U.S., GIRAULT p. 20 Ent. News **28.**

Centrobia similis **sp. n.** Italy figs., *walkeri* var. n. *minor*, figs., SILVESTRI p. 250 Boll. Lab. Portici **12.**—*C. makensis* **sp. n.** p. 230 fig., KIEFFER Nov. Zool. **24.**

Centrodora cicadae **sp. n.** Italy p. 261, fig., SILVESTRI Boll. Lab. Portici **12.**

Cerambycobius cicadae, SILVESTRI pp. 254-260 T.c.

Cerapterocerus pattersoni **sp. n.** Gold coast, p. 250 figs., WATERSTON Bull. ent. Res. **7.**—*C. australia* **sp. n.** p. 97, GIRAULT Insec. inscit. **5.**

Ceratosolen arabicus, GRANDI pp. 15-25, figs., *C. megacephalus* pp. 25-30, figs., GRANDI Bull. Soc. ent. ital. **48.**

Cerchysius occidentalis **sp. n.** Australia p. 95, GIRAULT Insec. inscit. 5.

Cerocephala (*Parasciatheras* subg. n.), *caelebs* **sp. n.**, Seychelles, figs, MASI p. 189 Nov. Zool. **24.**

Chaetospila = (*Spalangiomorpha*), GIRAULT p. 37 Insec. inscit. **5.**

Chalcis lepida p. 127, *sodalis* p. 128, **spp. n.**, Seychelles, figs., MASI Nov. Zool. **24.**—*C. calliphorae* **sp. n.** Australia, p. 30, pl., FROGGATT & FROGGATT Dep. Agric. N. S. W. Farm. Bull. **113.**—*C. amenoclès*, WATERSTON p. 179 Bull. ent. Res. **8.**

Chiloneurus afer p. 243 figs., *cyanonotus* p. 147 figs., **spp. n.** Gold Coast, WATERSTON Bull. ent. Res. **7.**—*C. dactylopii* to *Achrysophagus*, *C. amplicornis* to *Chrysopophagus*, GIRAULT p. 448 P. U. S. nat. Mus. **53.**

Chrysocharomyia elegans **sp. n.** Maryland p. 21, GIRAULT Ent. News **28.**

Chrysocharus mallochi **sp. n.** Illinois p. 213, GAHAN P. U. S. nat. Mus. **53.**

Chrysopophagus kansensis **sp. n.** p. 447, GIRAULT P. U. S. nat. Mus. **53.**

Cirrospilopsis metallicus **sp. n.** Maryland p. 100, GIRAULT Psyche **24.**

Cirrospilus ocellatus **sp. n.** Illinois p. 446, GIRAULT P. U. S. nat. Mus. **53.**

Closterocercus tau **sp. n.** California p. 101, GIRAULT Psyche **24.**

Coccidencyrtus eucalypti **sp. n.** Northern Territory, DODD Trans. R. Soc. S. Aust. **41** p. 354.

Coccidoxenus coelops p. 238 figs., *obscuratus* p. 242 figs., **spp. n.** W Africa, WATERSTON Bull. ent. Res. **7.**—*C. distinguendus* **sp.n.** Gold Coast, WATERSTON p. 311 T.c.

Coccophagus clarus **sp. n.** Northern Territory, DODD Trans. R. Soc. S. Aust. **41** p. 352.—*C. emersoni* p. 29, *australiensis* p. 30, **spp. n.** Australia, *ashmeadi* var. n. *perseus* p. 29, GIRAULT Insec. inscit. **5.**—*C. leptospermi* p. 92, *pulliclavus* p. 93 **spp. n.**, Australia, GIRAULT T.c.—*C. eleaphilus*, var. n., MASI p. 211 Nov. Zool. **24.**

Comperiella = (*Pseudanusia*) p. 37, GIRAULT Insec. inscit. **5.**

Copidosoma australia, australis, australica, **spp. n.** Australia p. 133, GIRAULT T.c.

Cosmocomoidea morilli, GIRAULT p. 36, Entomol. **50.**

Cruciulophus **gen. n.**, *niger* **sp. n.** Seychelles, figs., MASI p. 206 Nov. Zool. **24.**

Crossogaster atratus **sp. n.** Seychelles p. 125, figs., MASI T.c.

Cyrtogaster javensis **sp. n.** p. 135, GIRAULT Entomol. **50.**

Dicatoma kestraneura **sp. n.** Seychelles, p. 138, MASI Nov. Zool. **24.**

Derostenus pallipes **sp. n.** Maryland p. 214, GAHAN P. U. S. nat. Mus. **53.**

Dibrachys australia **sp. n.** p. 145 Australia, GIRAULT Insec. inscit. **5.**

Dinarmolaelaps **gen. n.** *Metastenini, protus* **sp. n.** Seychelles, MASI p. 172 Nov. zool. **24.**

Dinocarsis abnormis p. 136, *flavimesopleurum* p. 137, **spp. n.** Australia, GIRAULT Insec. inscit. **5.**

Dinoura eucalypti **sp. n.** Australia p. 153, GIRAULT T.c.

Dipara rufescens **sp. n.** Seychelles p. 186, MASI Nov. Zool. **24.**

Dirhinus inflexus **sp. n.** Gold coast p. 178, WATERSTON Bull. ent. Res. **8.**

Dirphiphagus **gen. n.** type *ancilla* Walk., BRÈTHES p. 25 An. zool. aplic. **1.**

Diversinervis = (*Cheiloneuroides* G.), p. 37, GIRAULT Insec. inscit. **5.**

Elachertodomyia **gen. n.** type *Secodes phloeotribi*, GIRAULT p. 110 Canad. Ent. **49.**

Elachertus, sp., MASI p. 200 Nov. zool. **24.**

Elasmus eximius, bellus, **spp. n.** Seychelles p. 199 figs., MASI T.c.—*E. telicotae* **sp. n.** Queensland, DODD Trans. R. Soc. S. Aust. **41** p. 345.

Embidobia brittanica **sp. n.** India p. 152, GIRAULT Entom. **50.**

Emersonopsis **gen. n.** type *Eutedon arizonensis* Ashm., GIRAULT p. 110 Canad. Ent. **49.**

Encyrtocephalus = (*Pseudorileya* G.), p. 152, GIRAULT Insec. inscit. **5.**

Encyrtus ventralis **sp. n.** Seychelles p. 153, MASI Nov. zool. **24.**

Endecatoma opposita **sp. n.** Santiago p. 9, BRÈTHES Revist. chilena **20** 1916.

Epistenia chilensis p. 27, *liguensis* p. 28, **spp. n.**, BRÈTHES T.c.

Epomphaloides ischnopterae **sp. n.** Maryland p. 257, GIRAULT Ent. News **28.**

Eriaporus **gen. n.** p. 320 *Miscogasteridae, laticeps* **sp. n.** Gold coast p. 321 figs., WATERSTON Bull. ent. Res. **7.**

Eucomys infelix var. n. *albiscapus* p. 143, figs., MASI Nov. zool. **24.**

Euderus = (*Omphalomorpha* G.), GIRAULT p. 152 Insec. inscit. **5.**

Eulophus californicus **sp. n.** p. 446, GIRAULT P. U. S. nat. Mus. **53.**

Eunotomyia **gen. n.** near *Amuscidea, festiva* **sp. n.** Seychelles, figs., MASI p. 195 Nov. zool. **24.**

Eunotus truncatipennis **sp. n.** Gold coast p. 252 figs., WATERSTON Bull. ent. Res. **7.**

Eupelmoides **gen. n.**, *obscuratus* **sp. n.**, Seychelles figs., MASI p. 160 Nov. zool. **24.**

Eupelmus malgascius **sp. n.** Seychelles p. 159, MASI T.c.—*E. cerambycoboideus* **sp. n.** Sydney p. 33, GIRAULT Insec. inscit **5.**—*E. biguttus* **sp. n.** Maryland p. 256, GIRAULT Ent. News **28.**

Euplectromorpha variicolor **sp. n.** Queensland, DODD Trans. R. Soc. S. Aust. **41** p. 367.

Eupteromalus tachinae **sp. n.** Tennessee p. 211, GAHAN P. U. S. nat. Mus. **53.**

Eurydinota braconis **sp. n.** Queensland, DODD Trans. R. Soc. S. Aust. **41** p. 349.

Euryischia alcurodis **sp. n.** Queensland, DODD p. 346 T.c.

Euryrhopalus diaphorocerus **sp. n.** Seychelles p. 148, figs., MASI Nov. zool. **24.**

Eurytoma casuarinae **sp. n.** Queensland p. 150, GIRAULT Insec. inscit. **5.**—*E. australia* n. n. for *acaciae* G. p. 155, GIRAULT T.c.

Eurytomidia gen. n., *dubia* sp. n. Seychelles, MASI p. 137 Nov. zool. **24.**

Eusandalum acmaeorerae **sp.n.** California p. 171, ROHWER P. U. S. nat. Mus. **53.**

Eusemion italicum **sp. n.** p. 80, MASI, Ent. Mo. Mag. **53.**—*E. cornigerum*, WATERSTON p. 314 figs. Bull. ent. Res. **7.**

Eutelus bruchophagi **sp. n.** Utah p. 212, GAHAN P. U. S. nat. Mus. **53.**—*E. betulae* p. 93, *salicis* p. 94, **spp. n.** U. S., GIRAULT Psyche **24.**

Geniaspidius **gen. n.** near *Ageniaspis, viduus* **sp. n.** Seychelles, figs., MASI p. 155 Nov. zool. **24.**

Gonatocerus silhouettae **sp. n.** Seychelles p. 228, figs., MASI T.c.—*G. bifasciativentris* **sp. n.** Java p. 134, GIRAULT Entomologist **50.**—*G. utahensis* **sp. n.** p. 446, GIRAULT P. U. S. nat. Mus. **53.**—*G. illinoiensis* **sp. n.** p. 91, GIRAULT Psyche **24.**

Grotiusomyia flavicornis sp. n. Washington p. 95, GIRAULT T.c.

Habrocytus morio p. 174, *cyanescens* p. 175, spp. n., Seychelles, MASI Nov. zool. 24.—*H. borrowi* p. 179, *aulacis*, *arkansensis*, *franciscanus*, p. 180, *dux*, *canadensis* p. 181, spp. n., Amer. bor., GIRAULT Canad. Ent. 49.

Habrolepis apicalis sp. n. Gold coast p. 317 figs., WATERSTON Bull. ent. Res. 7.—*H. aeruginosa* sp. n. Seychelles p. 156, MASI Nov. zool. 24.

Hemiptarsenus antennalis sp. n. Seychelles p. 208, MASI Nov. zool. 24.

Hexeurytoma gen. n. near *Eurytoma*, *grandis* sp. n. Queensland, DODD Trans. R. Soc. S. Aust. 41 pp. 358–359.

Hockeria fulvipes sp. n. Seychelles p. 130, MASI Nov. zool. 24.

Homalotylus microgaster sp. n. Australia p. 134, GIRAULT Insec. inscit. 5.

Hybothorax frater sp. n. Seychelles p. 134, MASI Nov. zool. 24.

Idarnes = (*Idarnomorpha* G.), GIRAULT p. 37 Insec. inscit. 5.

Isosoma insularum sp. n. Seychelles p. 139, MASI Nov. zool. 24.

Lamprostatus canadensis sp. n. p. 96, GIRAULT Psyche 24.

Leodamus gen. n. *Metastenini*, *onustus* sp. n. Seychelles, MASI p. 171 Nov. zool. 24.

Liodontomerus secundus, *insuetus*, spp. n., U. S. p. 208, GAHAN P. U. S. nat. Mus. 53.

Mahencyrtus gen. n. near *Chiloneurus*, *occultans* sp. n. Seychelles figs., MASI p. 157 Nov. zool. 24.

Marietta maculatipes, *novicapillata*, spp. n., W. Australia p. 32, GIRAULT Insec. inscit. 5.

Megastigmus hilli sp. n. Northern Territory, DODD Trans. R. Soc. S. Aust. 41 p. 361.—*Megastigmus porteri* sp. n. Santiago p. 9, BRÈTHES Revist. chilena 20 1916.

Megorismus poloni sp. n. California p. 97, GIRAULT Psyche 24.

Melittobia acasta anatomy, WATERSTON pp. 190–198 Parasitol 9.

Merallus gen. n. near *Micromelus*, *phaenacroides* sp. n. Seychelles fig., MASI p. 179 Nov. zool. 24.

Mesopeltis gen. n. near *Megapeltis*, *atrocyanea* sp. n. Seychelles figs., MASI p. 197 T.c.

Mestocharomyia oophaga sp. n. Queensland, DODD Trans. R. Soc. S. Aust. 41 p. 364.

Metacalosoter gen. n. p. 167, *frequens* sp. n. Seychelles p. 168, figs., MASI Nov. zool. 24.

Metalaptus gen. n. *Mymaridae*, *torquatus* sp. n. Sicily, MALENOTTI p. 339. pl. v, Redia 12.

Metapelma superba sp. n. Queensland, DODD Trans. R. Soc. S. Aust. 41 p. 357.

Metaphycus subg. n. vide *Aphycus*. Mercet

Micromelus affinis sp. n. Seychelles p. 177, MASI Nov. zool. 24.

Miscogaster australia sp. n. p. 36, GIRAULT Insec. inscit. 5.—*M. unguttata* sp. n. Maryland p. 23, GIRAULT Ent. News 28.—*M. flora* p. 96, *biguttata* p. 97, spp. n., U. S., GIRAULT Psyche 24.

Monobaeus hegeli sp. n. Michigan p. 106, GIRAULT Ent. News 28.

Mymar cincinnati sp. n. U. S., *venustum*, GIRAULT p. 99 Psyche 24.

Nasonia brevicornis, natural history, ROUBAUD Bull. Sci. France Belgique 50 pp. 425–439.

Neabrolepoideus gen. n. near *Habrolepoidea* p. 140, *bioculatus* sp. n. p. 141 Australia, GIRAULT Insec. inscit. 5.

Neodimmockia gen. n. near *Dimmockia*, *agromyzae* sp. n. Queensland, DODD Trans. R. Soc. S. Aust. 41 pp. 361–363.

Neomphaloidella mediogutta sp. n. Maryland p. 255, GIRAULT Ent. News 28.

Neomphaloides cincinnatus sp. n. p. 92, GIRAULT Psyche 24.

Neorhopus gen. n. near *Rhopus* p. 139, *australicus* sp. n. with var. *aureus* p. 140, GIRAULT Insec. inscit. 5.

Neosciatheras gen. n. p. 189, *laticeps* sp. n. Seychelles p. 190, figs., MASI Nov. Zool. 24.

Neotetrastichodes polychromus **sp. n.** Northern Territory, DODD Trans. R. Soc. S. Aust. **41** p. 366.

Notanisomorpha meromyzae **sp. n.** Indiana, GAHAN p. 216 P. U. S. nat. Mus. **53.**

Notoglyptus **gen. n.** *Pteromalinae, virescens* **sp. n.** Seychelles, MASI p. 181, figs. Nov. zool. **24.**

Ooctomus aureinotum **sp. n,** Queensland, DODD Trans. R. Soc. S. Aust **41** p. 351.

Pachycrepis spilopterus **sp. n.** Seychelles p. 185, MASI Nov. zool. **24.**

Pachyneuron virginicum p. 89, *texanum, californicum,* p. 90, **spp. n.,** GIRAULT Psyche **24.**

Parablastothrix **gen. n.** p. 538, *vespertinus* **sp. n,** Madrid, p. 541, figs., MERCET Bol. Soc. espan. **17.**

Parachrysocharis **gen. n.,** *javensis* **sp. n.,** GIRAULT p. 135 Entomol. **50.**—*P. semiflava* **sp. n.** Texas p. 129, GIRAULT Canad. Ent. **49.**

Parachrysomalla secunda **sp. n.** Australia p. 154, GIRAULT Insec. inscit. **5.**

Parageniaspis **gen. n.** near *Encyrtus, macrocerus* **sp. n.** Seychelles, figs., MASI p. 154 Nov. zool. **24.**

Paraleptomastix abnormis, SMITH, J. econ. Ent. **10** pp. 262–268 pl. xiii.—*P. notatus* **sp. n.** California p. 38, GIRAULT Entomol. **50.**

Paramyiocnema **gen. n.** type *M. marmorativentris* G., GIRAULT p. 93 Insec. inscit. **5.**

Paranastatus **gen. n.** p. 164, *egregius* p. 165, *violaceus* p. 166, **spp. n.** Seychelles, figs., MASI Nov. zool. **24.**

Paraphelinus; revision pp. 43–58, *perkinsi* **sp. n.** Guiana p. 54 figs., WATERSTON Bull. ent. Res. **8.**

Parasciatheras **subg. n.** vide *Cerocephala.* Masi

Perilampoides similis **sp. n.** Australia p. 147, GIRAULT Insec. inscit **5.**

Perilampus chrysopae, habits, SMITH Psyche **24** pp. 63–68.

Phaenacra eurycephala **sp. n.** Seychelles p. 178, MASI Nov. Zool. **24.**

Philoponectroma incongruens **sp. n.** Seychelles p. 145, figs., MASI T.c.

Platymesopus porteri **sp. n.** Chile p. 89, BRÈTHES Revist. chilena **20** 1916.

Podagrion terebrator **sp. n.** Seychelles p. 126, figs., MASI Nov. zool. **24.**—*P. nigriclava* **sp. n.** Northern Territory, DODD Trans. R. Soc. S. Aust. **41** p. 360.—*P. mantidiphagum* **sp. n.** West Indies p. 37, GIRAULT Entomol. **50.**

Polycystomyia benefica **sp. n.** Queensland, DODD Trans. R. Soc. S. Aust. **41** p. 346.

Polynema seychellense **sp. n.** p. 229 fig., MASI Nov. Zool. **24.**—*P. bifasciatipenne* var. n. *varium* p. 92, GIRAULT Psyche **24.**

Prococophagus = (*Tanaostigmoidella* G.), GIRAULT p. 37 Insec. inscit. **5.**

Propachyneuronia **gen. n.** p. 102 type *Encyrtus siphonophorae* Ashm., GIRAULT, Psyche **24.**

Propachytomoides **gen. n.,** *semialbiclavus* **sp. n.** Australia, p. 152, GIRAULT Insec. inscit. **2.**

Prospaltella fasciata **sp. n.** Italy p. 195, fig., MALENOTTI Redia **12.**

Pseudanastatus **gen. n.** p. 162, *crassicornis* **sp. n.** Seychelles p. 163, figs., MASI Nov. Zool. **24.**

Pseudiglyphomyia marilandica **sp. n.** p. 91, GIRAULT Psyche **24.**

Pteromalus hemileucae **sp. n.** New Mexico p. 210, GAHAN P. U. S. nat. Mus. **53.**

Pterosema subaenea **sp. n.** Queensland, DODD Trans. R. Soc. S. Aust. **41** p. 348.

Pterosemoidea drosophilae **sp. n.** Queensland, DODD **41** p. 350 T.c.

Rhicnopeltomyia aeneicoxa **sp. n.** Queensland, DODD p. 365 T.c.

Sceptrophorus marilandicus **sp. n.** p. 256, GIRAULT Ent. News **28.**

Sciatherellus **gen. n.** p. 189, *orycinus* **sp. n.** Seychelles p. 192, figs., MASI Nov. Zool. **24.**

Scotteus **gen. n.** near *Bothriothorax* p. 151, *ochroleucus* **sp. n.** Seychelles p. 152 figs., MASI T.c.

Scutellista gigantea **sp. n.** Eritrea p. 179, BERLESE Redia 12.

Serimus porteri **sp. n.** Chile p. 31, BRÈTHES An. Zool. Aplic. **1.**

Signiphora merceti **sp. n.** Spain p. 181 MALENOTTI Redia **12.**

Spalangia fallax **sp. n.** Seychelles p. 194, figs., MASI Nov. Zool. **24.**—*S. philippinensis* **sp. n.** p. 292 fig., FULLAWAY P. Hawai. ent. Soc. **3.**

Spalangiolaelaps **gen. n.** p. 22 near *Apterolaelaps*, *argenticoxa* **sp. n.** Maryland p. 23, GIRAULT Ent. News **28.**

Sphegigastrella **gen. n.**, *longigastra*, p. 183, *flavipes* p. 184, **spp. n.** Seychelles, MASI Nov. Zool. **24.**

Sphegipterosema dubia **sp. n.** Australia p. 146, GIRAULT Insec. inscit. **5.**

Stenelachistus **gen. n.** near *Stenomesius*, *impressus*, p. 201, figs. *brevicornis* p. 203, **spp. n.**, Seychelles, MASI Nov. Zool. **24.**

Stilbula lissoma **sp. n.** Seychelles p. 141 MASI T.c.

Stomatoceras pertorvus **sp. n.** Honolulu p. 5, GIRAULT Insec. inscit. **5.**—*S. carlylei*, *magnidens*, p. 148, *rousseaui* p. 149, **spp. n.**, Australia, GIRAULT T.c.

Stomatoceroides clariscapus **sp. n.** Queensland, DODD Trans. R. Soc. S. Aust. **41** p. 344.—*S. bidens* **sp. n.** Queensland p. 150, GIRAULT Insec. inscit. **5.**

Sycophaga sycomori, p. 30-39, figs., *S. silvestri* pp. 39-42, figs., GRANDI Bull. Soc. ent. ital. **48.**

Sycoryctes sebertianus **sp. n.** Seychelles p. 126, MASI Nov. Zool. **24.**

Symphycus **gen. n.** near *Aphycus*, *aphycoides* **sp. n.** Seychelles, figs., MASI p. 149 T.c.

Sympiesis laetus **sp. n.** Seychelles p. 204, MASI T.c.—*S. substigmatus* **sp. n.** U. S. p. 447, GIRAULT P. U. S. nat. Mus. **53.**—*S. marylandensis* **sp. n.** p. 37, GIRAULT Entomol. **50.**—*Sympiesis* = (*Notanisomorphella* = *Notanisomorphomyia* = *Pseudapheliminus* G.), GIRAULT p. 155 Insec. inscit. **5.**

Sympiesomorpha ornata p. 209, *pulchella*, *modesta*, p. 210, **spp. n.**, Seychelles, MASI Nov. zool. **24.**

Syntomosphyrum trichops **sp. n.** Seychelles p. 225, MASI T.c.

Systellogaster **gen. n.** near *Coelopisthia*, *ovivora* **sp. n.** Illinois, GAHAN p. 209 P. U. S. nat. Mus. **53.**

Tachinaephagus **gen. n.** near *Parasyrpophagus*, *australiensis* **sp. n.** Australia p. 142, GIRAULT Insec. inscit. **5.**

Tetracnemella megymeni, *hyalinipennis*, **spp. n.**, *megymeni brachyptera* var. n., Northern Territory, DODD, Trans. R. Soc. S. Aust. **41** p. 354–355.

Tetramelia chilensis **sp. n.** p. 26, BRÈTHES Revist. chilena **20** 1916.

Tetrastichus longiventris p. 213, *dolichocerus*, *distinguendus*, p. 214, *agnatus*, *theioneurus* figs., p. 215, *metalliferus* p. 220, *dispar* p. 221, *nigriceps*, *nigricoxa*, p. 222, *aeruginosus* p. 223, *longifimbriatus* p. 224 fig., **spp. n.**, Seychelles, MASI Nov. zool. **24.**—*T. ainsliei* p. 214, *dolosus* p. 215, **spp. n.**, U.S., GAHAN P. U. S. nat. Mus. **53.**—*T. ovipransus* **sp. n.** Virginia p. 368, CROSBY & LEONARD Ent. News **28.**—*T. bruchophagi*, URBAHNS pl. 78 p. 277–282 J. Agric. Res. **8.**

Thaumasura = (*Aressida* Cam. = *Agamerionella* G.), GIRAULT p. 155 Insec. inscit. **5.**—*T. westwoodi* **sp. n.** Australia p. 154, GIRAULT T.c.

Thripoctenus americensis Utah p. 447, *ancylae* New Jersey p. 448, **spp. n.**, GIRAULT P. U. S. nat. Mus. **53.**

Thysanus ater, SILVESTRI p. 266–271 fig., Boll. Lab. Portici **12.**

Tomocera australica **sp. n.** W. Australia p. 147, GIRAULT Insec. inscit. **5.**

Trichogramma evanescens, embryology, GATENBY Q. J. Microsc. Sci. **62** p. 149–187 3 pls.

Trididymus aureipes, *bigattatipennis*, p. 449, *aphides* p. 450, **spp. n.**, U.S., GIRAULT P. U. S. nat. Mus. **55.**

Trigonoderus algonquinia, *unguttus*, p. 396, *nonstylatus* p. 397, **spp. n.**, U.S., GIRAULT Ent. News **28.**

Trigonogastra agromyzae **sp. n.** Queensland, DODD Trans. R. Soc. S. Aust. **41** p. 347.

Trigonura californica **sp. n.** p. 171, ROHWER P. U. S. nat. Mus. **53.**

Trydymus aeneicornis, *gargantua*, *poloni*, **spp. n.**, U. S. p. 98, GIRAULT Psyche **24.**

Tumidiscapus oophagus **sp. n.** India p. 445, GIRAULT P. U. S. nat. Mus. **53.**

Verdunia **gen. n.** p. 203, *gloriosa* **sp. n.** Spain p. 204 figs., MERCET Bol. Soc. espan. **17.**

Xenanusia **gen. n.** p. 137 near *Epanusia, pulchripennis, gigantea,* **spp. n.,** Australia p. 138, GIRAULT Insec. inscit. **5.**

Zaommoencyrtus **gen. n.,** *poeta* **sp. n.** Australia, p. 143, GIRAULT T.c.

Zeteticontus xanthopus **sp. n.** Seychelles p. 146, MASI Nov. zool. **24.**

PROCTOTRYPIDAE, BETHYLIDAE.

†*Apenesia electriphila* **sp. n.** Burma in amber, p. 44 fig., COCKERELL Psyche **24.**

Aphanurus graeffei **sp. n.** Trieste p. 343, KIEFFER Ent. Meddel. **11.**

†*Bethylitella* **gen. n.** *Bethylidae* p. 365, *cylindrella* **sp. n.** Burmese amber p. 367 figs., COCKERELL Amer. J. Sci. **44.**

Calliceras formicaria **sp. n.** Luxemburg p. 347, KIEFFER Ent. Meddel. **11.**

Chlorodryinus pallidus, natural history, MISRA pp. 115–124 pl. xix figs. 5–7 Mem. Dep. Agric. India Ent. **5.**

Conostigmus signatifrons **sp. n.** Holland p. 348, KIEFFER Ent. Meddel. **11.**

Dichogmus formicarius **sp. n.** Holland p. 347, KIEFFER T.c.

Dicrogenium = (*Nomineia* K.) *maximum* **sp. n.** Sierra Leone p. 53, TURNER Tr. ent. Soc. Lond. **1917.**

Dryinus pyrillae, natural history, MISRA pp. 114–115 pl. xvii figs. 1–11; Mem. Dep. Agric. Ind. Ent. **5.**

Epyris, prey, BRIDWELL p. 262 P. Hawai. ent. Soc. **3.**—*E. muiri* p. 103, *elongatula* p. 104 fig., **spp. n.,** Africa, TURNER & WATERSTON Ann. Nat. hist. **20.**—*E. extraneus* **sp. n.** Oahu p. 278, BRIDWELL P. Hawai. ent. Soc. **3.**

Gonatopus; the british, MORLEY pp. 222–227 Entomol. **50.**

Hadronotellus pedester **sp. n.** Denmark p. 341, KIEFFER Ent. Meddel. **11.**

Lepidoscelio viatrix **sp. n.** India p. 139, BRUES P. Ac. Washington **3.**—*L. viatrix* p. 196 fig., BRUES Psyche **24.**

Leptacis fimbriata **sp. n.** Rumania p. 345, KIEFFER Ent. Meddel. **11.**

Lygocerus inquilinus **sp. n.** Germany p. 349, KIEFFER T.c.

Olixon; structure and taxonomy, *Saphobethylus pallidus* K. is a synonym, TURNER & WATERSTON p. 107 Ann. Nat. hist. **20.**

Parasierola emigrata **sp. n.** Honolulu, p. 1, ROHWER; notes on it BUSCK p. 3 Insec. inscit. **3.**

Paridris **gen. n.** near *Hadronotus* p. 27, *chilensis* **sp. n.** p. 28, BRÈTHES An. zool. aplic. **1.**

Polygnotus burkei **sp. n.** California p. 170, ROHWER P. U.S. nat. Mus. **53.**—*P. vernalis* **sp. n.** Maryland p. 256, MYERS P. U.S. nat. Mus. **53.**

Polymecus lasiopterae **sp. n.** Dakota p. 217, GAHAN P. U.S. nat. Mus. **53.**

Pristocera subrufescens p. 101, *neavei* p. 102, **spp. n.,** Africa, TURNER & WATERSTON Ann. Nat. hist. **20.**—*P. armifera,* larva, habits, HYSLOP p. 169 pl. xi P. ent. Soc. Washington **18.**

Pseudisobrachium merklei **sp. n.** Argentina p. 464 figs., BRUCH Physis **3.**

Pseudobrachium solenopsidicola **sp. n.** la Plata p. 143 fig., BRUCH T.c.

Rhabdepyris aethiops p. 105, *troglodytes* p. 106, **spp. n.,** Africa, TURNER & WATERSTON Ann. Nat. hist. **20.**

Sactogaster tripartita **sp. n.** Rumania p. 344, KIEFFER Ent. Meddel. **11.**

†*Scleroderma ? quadridentatum* **sp. n.** Burma in amber p. 43 fig., COCKERELL Psyche **24.**

Sclerodermus iridomyrmicicola **sp. n.** la Plata p. 141 fig., BRUCH Physis **3.**

Telenomus verticillatus **sp. n.** Denmark p. 342, KIEFFER Ent. Meddel. **11.**

CYNIPIDAE.

The type-species of 255 genera designated, ROHWER & FAGAN P. U.S. nat. Mus. **53** pp. 357–380.

Adleria **gen. n.** p. 359 type *Cynips kollari* Hartig, ROHWER & FAGAN T.c.

Aglaotomidea **gen. n.** p. 360 type *A. foersteri* Kieff., ROHWER & FAGAN T.c.

Amphibolips nigra, gall, BEUTENMULLER p. 348 Canad. Ent. **49.**

Andricus castanopsidis p. 345, *myrtifoliae, gemmiformis*, p. 346, U.S., *dugesi* Mexico p. 347, **spp. n.**, BEUTENMULLER T.c.

Aylax; synonymy, BAGNALL p. 200 Ent. Mo. Mag. **53.**

Biorhiza caepuaeformis, BEUTENMULLER p. 348 Canad. Ent. **49.**

Diholocynips **gen. n.** p. 365 type *H. nigra* Kieff., ROHWER & FAGAN P. U.S. nat. Mus. **53.**

Dryophanta floridensis **sp. n.** p. 349, BEUTENMULLER Canad. Ent. **49.**

Kleidotoma subintegra **sp. n.** England p. 349, KIEFFER Ent. Meddel. **11.**

Kleidotomidea **gen. n.** p. 369 type *K. hexatoma* Th., ROHWER & FAGAN P. U.S. nat. Mus. **53.**

Trirhoptrasema ashmeadi n. n. for *Kleidotoma americana* Ashm., ROHWER & FAGAN p. 377 T.c.

Trisoleniella **gen. n.** p. 377 type *Andricus saltatus* Ashm., ROHWER & FAGAN T.c.

HYMENOPTERA, PHYTOPHAGA OR CHALASTOGASTRA.

Oviposition, parthenogenesis, ENSLIN Ent. Mitt. **6** pp. 238–242.

Acantholyda ferruginea **sp. n.** New York p. 192, FELT Canad. Ent. **49.**

Acordulecera hicoriae **sp. n.** Pennsylvania p. 157, ROHWER P. U.S. nat. Mus. **53.**

Ametastegia glabrata, NEWCOMER U.S. Dept. Agric. Bull. **265** 1916 pp. 1–40 pls. i ii ff. 1–6.

Arge bravardi Monastir, *obscuripes* France, **spp. n.**, *fuscipes* var. n. *bleusei*, PIC p. 18 Echange **33.**

Ateuchopus libanensis var. n. *intermedius*, PIC Echange No. **381** hors texte p. 2.

Caliroa cerasi, WILSON Agric. Exp. Sta. Oregon **1911–12** 1913 pp. 118–121 ff. 10–13; parthenogenesis, EWING p. 330 Ann. ent. Soc. Amer. **10.**

Cephus (*Fossulocephus* subg. n.) *citriniventris* **sp. n.** Algeria, PIC Echange No. **381** hors texte p. 2.—*C. occidentalis* habits, CRIDDLE Agric. Gaz. Canada **4** p. 176.

Cimbex sylvarum, oviposition, CHAPMAN Proc. ent. Soc. Lond. **1916** pp. lxvii–lxix figs.—*C. 4-maculata*, SARRA pp. 275–285 figs. Boll. Lab. Portici **12.**

Craterocerus californicus **sp. n.** p. 234, ROHWER P. U.S. nat. Mus. **53.**

Diprion simile, oviposition, ZAPPE J. econ. Ent. **10** p. 188.

Emphytus mellipes var. n. *albolabris* p. 152, ROHWER P. U.S. nat. Mus. **53.**

Empria fragariae, life history p. 293 pl. vii ff. 2, 3, 6, *maculata* life history p. 294 pl. vii ff. 1, 4, 5, WEBSTER Proc. Iowa Ac. **23.**

Eriocampoides castaneae **sp. n.** Virginia p. 152, ROHWER P. U.S. nat. Mus. **53.**

†*Eriocampoides mimus* **sp. n.** Florissant miocene, COCKERELL p. 390 P. U.S. nat. Mus. **53.**

Fossulocephus **subg. n.** *vide Cephus.* Criddle.

Lophyrus; parthenogenesis, ENSLIN Ent. Mitt. **6** pp. 238–240.

Macrophya raui p. 264, *simillima* p. 265, **spp. n.**, Missouri, ROHWER Ent. News **28.**—*M. castaneae* **sp. n.** Virginia p. 151, ROHWER P. U.S. nat. Mus. **53.**

Monoplopus notaticollis **sp. n.** Palestine, *saltuum* var. n. *nigromaculatus*, PIC Echange No. **381** hors texte p. 1, *moreanus* varr. p. 3.

†*Paleotaxonus vetus* **sp. n.** Florissant miocene p. 390, COCKERELL P. U.S. nat. Mus. **53.**

Paururus ovipositor, MORICE p. xxi pl. A Pr. ent. Soc. Lond. **1917.**

Periclista = (*Isodyctium* Ashm.) p. 153, *dilata* Cr. = (*subgregarium* Dyar); *P. californica, hicoriae*, p. 154, *similaris* p. 155, *xanthognatha* p. 156, **spp. n.**, U.S., ROHWER P. U.S. nat. Mus. **53.**

Phymatocera aterrima, oviposition, MORICE p. xxii Pr. ent. Soc. Lond. **1917**; larva p. 225 figs., CHAPMAN Ent. Mo. Mag. **53.**

Pleuroneura borealis **sp. n.** New York p. 191, FELT Canad. Ent. **49.**

Pteronus sertifer, proportions of sexes, saw, MORICE Pr. ent. Soc. Lond. **1916** pl. xxxiv.

Rhadinoceraea micans, larva p. 226 figs., CHAPMAN Ent. Mo. Mag. **53.**

Sirex gigas piercing lead, VAYSSIÈRE p. 273 Bull. soc. ent. France **1916.**

Spatulocephus and *Peronistilomorphus*, PIC Echange No. **381** hors texte p. 2.

†*Taeniurites* **gen. n.** p. 382, *fortis* **sp. n.** Florissant miocene p. 383 f. 14, COCKERELL P. U.S. nat. Mus. **52.**

Tenthredella birmensis n. n. for *Tenthredo gribodoi* Kon., ROHWER p. 151 P. U.S. nat. Mus. **53.**

†*Tenthredella oblita* **sp. n.** Florissant miocene, COCKERELL p. 389 P. U.S. nat. Mus. **53.**

Tenthredopsis; species of the *excisa* group, PIGEOT pp. 23 24 Echange **33.**

Thrinax mixta, development, NORDSTRÖM Ent. Tidskr. **38** p. 324.

Trachelus syriacus **sp. n.**, PIC Echange No. **381** hors texte p. 1.

LEPIDOPTERA.

GENERAL.

Classification, phylogeny, setae and colours of larvae and pupae, SCHIERBEEK thesis 157 pp. 5 pls.

Larval characters in classification, HEINRICH P. ent. Soc. Washington **18** pp. 154–163 figs.

Zeugloptera, ord. nov. for *Micropteryx*, CHAPMAN pp. 310–314 Tr. ent. Soc. London **1916.**

Determination of types of genera, HAMPSON pp. 463–467 Ent. News **28.**

Nomenclature of varieties, TURNER pp. 83 & 84 Ent. Rec. **29.**

Insect disappearances and reappearances, ARKLE pp. 92–94 Entomol. **50.**

List of spp. new to Sweden, BENANDER Ent. Tidskr. **38** p. 102.

Danish *Heterocera*, part 4 (Danish), KLØCKER København **1917** 78 pp. 4 pls. & 102 figs.

Check-list of the South African Lepidoptera Heterocera, JANSE pp. 219 +xii issued by the Transvaal Museum Pretoria.

Notes on north african Lepidoptera, many eggs described, CHRÉTIEN pp. 369-503 Ann. Soc. ent. France **85.**

List of egyptian *Lep.*, ANDRES Bull. ent. Soc. Egypt **1912** 1913 pp. 53–114.

Check list of boreal american Lep., 661 spp. *Rhop.*, 8,495 *Heteroc.*, BARNES & MCDUNNOUGH **1917.**

Criticism of the Barnes & McDunnough North-american check-list, DYAR Insec. inscit. **5** pp. 41–44.

Lepidoptera of Florida, GROSSBECK Bull. Amer. Mus. **37** pp. 1–147.

Remarks on Grossbeck's list of Florida Lepidoptera (in Bull. Amer. Mus.), BARNES & MCDUNNOUGH Contr. **3** pp. 217–223 1916.

Review of New Zealand Notodontina, MEYRICK pp. 248–273 Tr. N.Z. Inst. **49.**

Figures of previously described Formosan Lepidoptera, STRAND pl. viii p. 312 Ent. Mitt. **6.**

Some mexican larvae, DYAR Insec. inscit. **5** pp. 128–132.

Olfactory organs of *Lep.*, MCINDOO J. Morphol. **29** pp. 33–54 figs.

Gynandromorph *Lep.*, COCKAYNE pp. 322–335 pls. xciii–civ Tr. ent. Soc. London **1916.**

Apterous *Lepidoptera*, CHAPMAN Trans. London Nat. Hist. Soc. **1916** pp. 49–76.

Mimetic *Lep.* in Mexico. HERRERA Bol. Est. Biol. Mexico **2** pp. 86–91 4 pls.

Lepidopterous deformities, CHRISTELLER Ent. Mitt. **6** pp. 1–32 etc.

Seasonal dimorphism, BARKER S. afric. J. Sci. **1** pp. 99–105.

Hour of emergence, DECARY pp. 235–237 Bull. Soc. ent. France **1917.**

Attitude, recapitulation, CHAPMAN pp. 301–309 pl. lxxx Tr. ent. Soc. London **1916.**

Coloration of cocoons, DEWITZ Zool. Anz. **49** pp. 170–176.

Macrolepidoptera and *Phragmites communis,* HOFFMEYER Ent. Meddel. **11** pp. 6–15.

Preservation between glasses, VERITY Bull. Soc. ent. France **1917** pp. 312–316.

RHOPALOCERA.

Annotated list, 282 spp. *Rhopalocera* of Tharrawady and Pegu, ELLIS J. Bombay Soc. **25** p. 104 etc.

Numerous notes on Oberthur's Faune de la Barbarie, ROTHSCHILD Nov. zool. **24** pp. 61–120 325–373 393–409.

The *Rhopalocera* of Elba, with new names for forms, VERITY pp. 175–193 Bull. soc. ent. ital. **48.**

Butterflies of Egypt and Sinai, GRAVES pp. 135–157 Bull. ent. Soc. Egypte **7** 1916.

Notes on North-american diurnal Lepidoptera, BARNES & MCDUNNOUGH Contr. **3** pp. 53–138 pls. iv–xi.

Dates of appearance near Florence, VERITY pp. 194–200 Bull. Soc. ent. ital. **48.**

Migration, WILLIAMS Tr. ent. Soc. London **1917** pp. 154–164.

Packing in papers, PEILE pp. 309–312 figs. J. Bombay Soc. **25.**

PAPILIONIDAE.

Iphiclides feisthamelii, distribution, ROWLAND-BROWN p. 126 Entomol. **50.**—*I. podalirius protesilaus,* MCCLYMONT p. 90 Entomologist **50.**

Papilio weberi **sp. n.** W. Africa p. 14 pl. iv f. 1, HOLLAND Ann. Carnegie Mus. **11.**—*P. weiskei goodenovii* p. 3 and *stresemanni* f. 15 p. 4, subspp. n., ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.—*P. bianor* in England, MEYRICK & EDS. p. 258 Ent. Mo. Mag. **53.**—*P. dardanus cenea,* the varieties of, BARKER Ann. Durb. Mus. **2** pp. 34–38 pl. vii.—*P. demoleus,* early stages, SCOTT p. 238 Entomol. **50.**—*P. epycides melanoleucus* ab. *palluta* n., NIRE Dobuts. Z. Tokyo **29** pp. 145–148.—*P. goliath,* ♀, JOICEY & TALBOT p. 217 Ann. Nat. hist. **20.**—*P. menestheus* var. n. *aureus, hesperus* var. n. *kassaiensis,* MOREAU p. 126 Bull. Soc. ent. France **1917.**—*P. polytes romulus,* forms, POULTON Pr. ent. Soc. Lond. **1917** pp. xxx–xxxii.—*P. americus* pl. iv f. 1, *glaucus* figs. 3 & 4, p. 53, *aliaska* f. 2 p. 54, notes on, BARNES & MCDUNNOUGH Contr. **3** 1916.

Parnassius ; notes on north-american, pp. 54–57 pl. v, BARNES & MCDUNNOUGH Contr. **3** 1916.—*P. apollo,* variation, AURIOL pp. 129–151 Bull. Soc. Lép. Genève **3.**

Troides allottei, ♀, PEEBLES & SCHMASSMANN p. 426 Nov. zool. **3.**

PIERIDAE.

Pieridae ; notes on north-american, pp. 57–69 pls. v–vii, BARNES & MCDUNNOUGH Contr. **3** 1917.

Anthocharis genutia var. n. *flavida,* SKINNER p. 436 Ent. New **28.**

Callidryas scylla obscura form. n., VAN DEN BERGH Tyds. Ent. **60** p. 268 pl.

Delias carstensziana f. 14, *wollastoni* f. 20, p. 8, *inexpectata* f. 4, *klossi* f. 27, p. 9, **spp. n.,** New Guinea, also subspp. n. *zarate flavidior* p. 5, *dicefulvoflava* p. 6 and *leucobalia distincta* p. 7, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.—*D. ladas waigeuensis* subsp. n. p. 217, JOICEY & TALBOT Ann. Nat. hist. **20.**

Euchloe ausonia var. n. *libyca* figs., TURATI Bull. Soc. ent. France **1917.**—*E. cardamines,* var., RAYNOR p. 207 Entomol. **50.**

Gonepteryx cleopatra, life-history p. 3, BAGWELL-PUREFOY p. 3 Entomol. **50.**

Hebomoia solomonensis **sp. n.** p. 332, SWINHOE Ann. Nat. hist. **19.**

Ixias pyrene insignis ab. n. *pallida,* NIRE Dobuts. Z. Tokyo **29** pp. 145–148.

Mylothris mortoni **sp. n.** Abyssinie, BLACHIER p. 173 fig. 1 pl. xv Bul. Soc. Lép. Genève **2** 1913.

Pieris monbeigi **sp. n.** Ta-tsien-lou pl. cccclxxiv figs. 3908 & 3909, OBERTHÜR p. 126 Et. Lép. comp. **14.**—*P. napi atlantica* subsp. n. p. 75, ROTHSCHILD Nov. zool. **24.**—*P. rapae,* variation, LISTER p. 241 Entomol. **50.**—*P.*

napi, bibliography continued, TURNER Ent. Rec. **29** pp. 39 etc.—*Pieris;* notes on North-american forms pp. 57–59 pl. vi & pl. vii, BARNES & McDUNNOUGH Contr. **3** 1916.

Tatochila; monograph of chilean with 2 pls., *pyrrhomma* Röb. p. 52, GIACOMELLI Revist. chilena **20** 1916 pp. 41–57.—*Tatochila;* notes, GIACOMELLI pp. 371–378 Physis **3**.

Teracolus vi = (*immaculata* Rob.), SWINHOE p. 332 Ann. Nat. hist. **19**.

Terias candida f. n. *biakensis*, JOICEY & TALBOT p. 218 Ann. Nat. hist. **20**.

Teriocolias atinas meridionalis, GIACOMELLI p. 382 Physis **3**.

DANAIDAE, HELICONIDAE, ACROCIDAE, PALAEOTROPIDAE.

Acraeinae; melanic aberrations, BARKER Ann. Durb. Mus. **1** pp. 451–457 pls. xxiv–xxv.

Acraea tropicalis **sp. n.** Congo, *conradti* ab. n. *flavescens* Afrique or., *horta* ab. n. *conjuncta*, BLACHIER Bul. Soc. Lép. Genève **2** 1913.

Actinote; revision, OBERTHÜR Et. Lép. comp. **14** pp. 77–126 pls. ccccclxiii—ccccclxxiii; the following may be new though not so indicated: *mathani* p. 85 f. 3849, *erebia* p. 90 f. 3855, *incarum* p. 91 f. 3856, *laeta* p. 93 figs. 3857 & 3858, *tenebrarum* p. 95 f. 3859, *culoti* p. 101, *lacrymosa* p. 102 f. 3869, *menoetes* p. 105 f. 3871, *moyobambae* f. 3875, *rufina* figs. 3876 & 3877, p. 106, *morio* p. 112 f. 3878, *lorida* f. 3879, *auloeda* f. 3882, p. 113, *brettia* p. 114 f. 3883 & 3884, *byssa* p. 115 figs. 3886 & 3887, *lolia* f. 3889, *brylla* figs. 3890 & 3891, p. 116, *bubona* p. 117 ff. 3892 & 3894, *brychia* figs. 3895 & 3896, *byzas* figs. 3897–3901, p. 118, *brauronia* figs. 3902 & 3903, *zaratensis* figs. 3904 & 3905, p. 119, **spp. n.**, Amer. mer. The following are also probably varr. n.: *flavibasis eulalia* f. 3860 and *f. eulogia* f. 3861, p. 96, *dicaeus pallasia* f. 3862 p. 98, and *d. pallasinia* f. 3863, *euclia avuncula* p. 104 f. 3870, *hahneli meridae* p. 113 f. 3881, OBERTHÜR Et. Lép. comp. **14**.

Danais chrysippus, pupal coloration, CLAINPANAIN Bull. Soc. ent. Egypte **9** p. 58.—*D. petiverana*, in Natal, CHUBB p. 253 Ann. Durban Mus. **1** 1916.

Eueides egeriformis **sp. n.** Maroni, JOICEY & KAYE p. 430 pl. cxii f. 8 Tr. ent. Soc. London **1916**.

Heliconius ignotus **sp. n.** Peru p. 89 pl. v f. 5, also numerous varr. n. pp. 88–94, pls. v & vi, JOICEY & TALBOT Ann. Nat. hist. **20**.—*H. melpomene*, numerous varr. n., JOICEY & KAYE Tr. ent. Soc. London **1916** pp. 413–423 pls. cvii & cviii.

Isamia eclecta **sp. n.** Burma p. 331, SWINHOE Ann. Nat. hist. **19**.

Miyana **gen. n.** type *moluccana* Fldr., FRUHSTORFER p. 743 Seitz. Faun. exot. Indo-austral. **9**.

Salutura plexippus var. n. *adnana* p. 331, SWINHOE Ann. Nat. Hist. **19**.—*S. affinis* subspp. n. *olga* & *nora*, SWINHOE p. 157 Ann. Nat. hist. **20**.

Salpinx ceramica **sp. n.** p. 407, SWINHOE T.c.

Tellervo zoilus distincta, assarica wollastoni subspp. n., p. 14, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

NYMPHALIDAE.

Nymphalidae; notes on North-american, BARNES & McDUNNOUGH Contr. **3** pp. 74–102 pls. viii, ix & x 1916.

Fruhstorfer concludes this family (*Herona—Miyana*), Seitz Grosschmett. Indo-austral. **9** pp. 705–766; his numerous varietal forms are not mentioned below.

Adelpha valentina Andes p. 514, *aufidia* Columbia p. 525, *pseudo messana* Peru, *calliphane, falcipennis* p. 526, *epizygis, rufila, epona* p. 527 Brazil, *rothschildi* Ecuador p. 528, *gavina*, Brazil p. 529, *zunilaces* Iquitos, *biedermanni* p. 530, **spp. n.**, FRUHSTORFER Seitz Fauna exot. americ. **5** 1915.

Ageronia rosandra **sp. n.** S. Paulo de Olivencia p. 543, FRUHSTORFER T.c.

Anaea tehuana **sp. n.** Mexico p. 174, HALL Entomol. **50**.

A. testacea Peru p. 585, *acaudata* Bolivia p. 586, *vicinalis* Brazil p. 590, *chorophila* Bolivia p. 591, **spp. n.**, RÖBER Seitz Fauna exot. americ. **5** 1916.

Apatula (*sic*) *asakurai* **sp. n.** NIRE Dobuts. Z. Tokyo **29** pp. 145–148 pl. X.

Apaturina erminea octavia ♀ JOICEY & TALBOT p. 218 Ann. Nat. hist. **20.**

Araschnia chinensis **sp. n.** p. 474 f. 3906, OBERTHÜR p. 125 Et. Lép. comp. **14.**

Argynnis californica **sp. n.** p. 328, SKINNER Ent. News **28.**—*A. aglaia* ab. *molybdina*, NEWNHAM & ROWLAND-BROWN p. 207 & p. 230 Entomol. **50.**—*A. paphia* ab. *confluens* p. vii f. 4 p. 128, REVERDIN Bull. Soc. Lep. Genève **3.**

Basilarchia arthemis Iowa, WOLDEN P. Iowa Ac. **23** p. 269.

Brenthis pales, TURNER pp. 101–104 etc. Ent. Rec. **29.**

Callicore gueneei Ecuador, *artemis* Columbia, **spp. n.**, p. 502, RÖBER Seitz. Faun. exot. americ. **5** 1915.

Callithea freyja Peru, *fassli* Ecuador, **spp. n.**, p. 493, RÖBER T.c.

Catagramma quirina **sp. n.** Brazil, *maimuna kayei* subsp. n., HALL p. 172 Entomol. **50.**

Charaxes lydiae **sp. n.** W. Africa p. 16 pl. iv f. 2, HOLLAND Ann. Carnegie Mus. **11.**

Chlosyne hyperia irrubescens subsp. n. p. 163, HALL Entomol. **50.**

Colaenis julia dominicana subsp. n. p. 161, HALL T.c.

Cymothoe aramis f. n. *excelsior*, HALL p. 173 T.c.

Cyrestis atosia **sp. n.** Burma p. 408, SWINHOE Ann. Nat. hist. **20.**

Dracaenura arfakalis **sp. n.** New Guinea p. 158, SWINHOE T.c.

Dynamine amazonica p. 505, *agnes* Peru p. 506, *meridionalis* Paraguay p. 508, **spp. n.**, RÖBER Seitz. Faun. exot. americ. **5** 1915.—*D. haenschi* **sp. n.** Ecuador p. 171, HALL Entomol. **50.**

Euripus charonda var. *monbeigi* p. 474 f. 3907, OBERTHÜR p. 126 Et. Lép. comp. **14.**

Euryphaedra thauma ♂, HALL p. 173 Entomol. **50.**

Hypna mexicana **sp. n.** p. 173, HALL T.c.

Hypolimnas devis waigeuensis subsp. n. p. 218, JOICEY & TALBOT Ann. Nat. hist. **20.**—*H. misippus* ab. n. *pallens*, NIRE Dobuts. Z. Tokyo **29** p. 145–148.

Limenitis arthemis variability, mimicry, ABBOTT St. Louis Mo. Washington Univ. Stud. **1**–1914 pp. 203–221 pl. xxxvii ff. 1–2.—*L. rivularis* versus *camilla*, STICHEL p. 56 D. ent. Zs. Iris. **31.**

Melitaea arida **sp. n.** Arizona p. 328, SKINNER Ent. News **28.**—*M. phoebe leechi* subsp. n. p. 99, ROTHSCHILD Nov. zool. **24.**—*M. phoebe* ab. n. *yagii*, NIRE Dobuts. Z. Tokyo **29** pp. 145–148.

Neptis ancus Burma, *margala* Borneo, **spp. n.**, p. 409, SWINHOE Ann. Nat. hist. **20.**

Panacea procilla mamorensis subsp. n. p. 173, HALL Entomol. **50.**

Pantoperia mera **sp. n.** Borneo p. 410, SWINHOE Ann. Nat. hist. **20.**

Phyciodes zamora Venezuela, *cortes* Mexico p. 161, *carrera* Guatemala, *aquila* Colombia p. 162, *notus* Peru p. 163, **spp. n.**, HALL Entomol. **50.**

Polygonia c-album var. *o-album*, NEWNHAM p. 230 Entomol. **50.**

Pyrameis myrinna ab. n. *eunice* p. 171, HALL Entomol. **50.**—*P. indica* ab. n. *horishanus*, NIRE Dobuts. z. Tokyo **29** pp. 145–148.

Siderone mars angustifascia subsp. n. p. 174, HALL Entomol. **50.**

Timelaea maculata ab. n. *confluens*, NIRE Dobuts. z. Tokyo **29** pp. 145–148.

Vanessa c-album ab. n. *cloqueti*, fig., CLEMENT p. 124 Bull. Soc. ent. France **1917.**

SATYRIDAE.

Satyridae; notes on North-american, BARNES & MCDUNNOUGH Contr. **3** pp. 70–73 pl. viii 1916.

Coenonympha arcania ab. n. *elliptica* p. 128 pl. vii f. 1, REVERDIN Bull. Soc. Lep. Genève **3.**—*C. pamphilus* ab. n. *nolckeniana* p. 295, STRAND Ent. Mitt. **6.**

Epinephele barrosi **sp. n.** Chile p. 85, fig., FIGUEROA Revist. chilena **21.**—*E. limonias* & *janirioides* pp. 29–32 figs. *j.* var. *quinquepunctata* p. 34 f. 4, FIGUEROA Revist. chilena **20** 1916.—*E. jurtina* oviposition, REHFOUS pp. 156–159 Bull. Soc. Lép. Genève **3.**

Erebia medusa varr. with subspp. n. etc. pp. 43–51, *aethiops* f. n. *altivaga* p. 53, subspp. n. *sapaudia* p. 54 & *salaria* p. 55, FRUHSTORFER D. ent. Zs. Iris. **31.**

Harsiesis pallidifascia **sp. n.** New Guinea p. 15 f. 7, ROTHSCHILD Rep. B. O. U. **2** No. 15 1916.

Hypocysta osyris waigeuensis subsp. n. p. 218, JOICEY & TALBOT Ann. Nat. hist. **20.**

Melanargia galathea meadewaldoi subsp. n. p. 110, *ines colossea* subsp. n. p. 111, ROTHSCHILD Nov. zool. **24.**—*M. lachesis* & allies, ROWLAND-BROWN pp. 123–127 etc. Entomol. **50.**

Mycalesis biformis p. 15 figs. 18 & 28, *fulvianetta* p. 16 f. 21, **spp. n.**, *discobolus signata* subsp. n. p. 16, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.—*M. arabella*, ♀, JOICEY & TALBOT p. 219 Ann. Nat. hist. **20.**

Pararge; historical, taxonomical, TURNER Pr. S. Lond. ent. Soc. **1916–17** pp. 7–17.—*P. aegeria* & other Satyrids, GIBBS Tr. Hertfordsh. Soc. **16** pp. 173–188 pl. xv.—*P. maera meadewaldoi* subsp. n. p. 112, ROTHSCHILD Nov. zool. **24.**—*P. aegeria*, TURNER Pr. S. Lond. ent. Soc. **1916–17** pp. 89–95, *aegeria* var. *tireis*, GIBBS p. 95 Pr. S. Lond. ent. Soc. **1916–17**; *P. aegeria* var. *egerides*, PERKINS pp. 202–206 Ent. Rec. **29**; GIBBS & PERKINS Pr. S. Lond. ent. Soc. **1916–1917** pp. 100–102.

Platyphthima klossi **sp. n.** New Guinea p. 14 f. 32, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Satyrus sylvicola oberthueri subsp. n. p. 105 *fidia hebitis* p. 106 & *f. intermedia* p. 107, subspp. n., ROTHSCHILD Nov. zool. **24.**

MORPHIDAE and allies.

Brassolis isthmia, DUNN p. 473 pls. xxii & xxiii J. econ. Ent. **10.**

Caligo; the species, synonymy, KAYE Pr. ent. Soc. Lond. **1917** pp. 19–21.—*C. teucer*, *joasa cachi* & *ecuadora*, subspp. n., *eurylochus delectans* subsp. n., JOICEY & KAYE p. 181 Ent. Rec. **29.**

Hyantis albiplaga **sp. n.** New Guinea p. 18, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Morpho adonis & *eugenia* distinguished p. 25, figs., *adonis* var. *intermedia* p. 27, KAYE Pr. ent. Soc. Lond. **1917**; *M. marcus*, ROTHSCHILD p. 28 T.c.

Morphotaenaris schoenbergi wollastoni p. 19, *s. littoralis* p. 20, subspp. n., ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Taenaris bioculatus grisescens subsp. n. p. 18, ROTHSCHILD T.c.

ERYCINIDAE.

Barbicornis marginata **sp. n.** Brazil p. 664, SEITZ Fauna exot. americ. **5.**

Hamearis cisandina **sp. n.** Rio Salado p. 701, SEITZ T.c.

Lymnas araguaya **sp. n.** Goyaz p. 660, *cratippa* Matto Grosso p. 661, **spp. n.**, SEITZ T.c.

Mimocastnia **gen. n.**, *rothschildi* n. n. for *plagiaria* Godm., Guiana, SEITZ p. 652 T.c.

Neotaxila **subg. n.** of *Taxila*, for *dora* Fruhst. etc., FRUHSTORFER p. 791 Seitz Fauna exot. Indo-austral. **9.**

Nymphidium maravalica Trinidad, *enimanga* Paraguay, **spp. n.**, p. 711, SEITZ Faun. exot. americ. **5.**

Praetaxila **gen. n.** type *segecia*, FRUHSTORFER p. 793 Seitz Fauna exot. Indo-austral. **9.**—*Praetaxila wallacei arfakensis* subsp. n. p. 219, JOICEY & TALBOT Ann. Nat. hist. **20.**

Zarax **subg. n.** of *Laxita* for *teneta* Hew., FRUHSTORFER p. 789 Seitz Fauna Indo-austral. **9.**

LYCAENIDAE.

Female genitalia, CHAPMAN Tr. ent. Soc. London **1916** pp. 297-300 4 pls.

Scales, especially leaden-coloured, COCKAYNE p. 165 pl. xi. Tr. ent. Soc. Lond. **1917.**

Notes on North-American Lycaenidae, BARNES & MCDUNNOUGH Contr. **3** pp. 104–120 pl. xi, 1916.

Problematic forms in Lycaenidae, COURVOISIER Verh. Ges. Basel **28** pp. 264-293.

Resting attitude, COLTHRUP p. 15 Ent. Rec. 29.

GRÜNBERG commences subfam. Lycaeninae, in Seitz Fauna exotica Indo-austral. **9** pp. 824-848, 1915 and 1916.

Agriades coridon varr. *arragonensis* and *hispana*, SHELDON p. 1-3 Ent. Rec. **29**, CHAPMAN T.c. p. 17.—*A. coridon roystonensis*, etc., MOORE pp. 87-89 Pr. S. Lond. ent. Soc. **1916-17**.—*A. coridon* and *aragonensis*, QUERCI pp. 241-246 Ent. Rec. **29**.—*A. thersites*, ROWLAND-BROWN p. 186 Entomol. **50**.

Allotinus anaxandridas, caesemius, **spp. n.**, Mindanao p. 814, FRUHSTORFER Seitz Fauna exot. Indo-austral. **9**.

Arhopala dascia **sp. n.** Burma p. 409, SWINHOE Ann. Nat. hist. **19**.—*A. restricta* **sp. n.** p. 36 f. 16 New Guinea, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.—*A. fulla babsi* subsp. n. p. 219, JOICEY & TALBOT Ann. Nat. hist. **20**.

Candalides argenteus **sp. n.** New Guinea p. 30, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.—*C. philotas cineraceus* subsp. n. p. 220, JOICEY & TALBOT Ann. Nat. hist. **20**.

Chrysophanus virgaureae subspp. n. *chrysorrhoa* p. 33, *cissites* p. 34, *the ages* p. 40, FRUHSTORFER D. ent. Zs. Iris **31**.—*C. dispar* in northern France, ROWLAND-BROWN pp. 97-99 Entomologist **50**.

Cupido minimus, variation, FROHAWK p. 229 Entomol. **50**.

Curetis limbatus **sp. n.** New Guinea p. 35, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.

Cyaniris owgarra parvipuncta subsp. n. p. 27, ROTHSCHILD T.c.

Deudorix concolor **sp. n.** Waigeu p. 220, JOICEY & TALBOT Ann. Nat. hist. **20**.

Gerydus (*Archaeogerydus*) *gethusus* Tonkin p. 216, *G. courvoisieri* Java p. 818, **spp. n.**, FRUHSTORFER Fauna exot. Indo-austral. **9**.

Glaucopsyche behri australis subsp. n. p. 350, GRINNELL Canad. Ent. **49**.

Hypolycaena pseudophorbas, phorbanita, **spp. n.**, New Guinea p. 33, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916. —*H. livia, food-plant*, ANDRES p. 88 Bull. Soc. ent. Egypte **7**.

Lampides pactolus waigeuensis subsp. n. p. 221, JOICEY & TALBOT Ann. nat. hist. **20**.—*L. baeticus*, hibernation, ROWLAND-BROWN p. 18 and p. 66 Entomol. **50**.

Logania evora Sula p. 806, *turdeta* Cebu p. 807, *masana* New Guinea p. 808, **spp. n.** FRUHSTORFER Seitz Fauna exot. Indo-austral. **9**.

Loxura atymnus luzonica nov., SWINHOE p. 158 Ann. Nat. hist. **20**.

Lycaena; various notes, REHFOUS Bull. Soc. Lép. Genève **3** p. 209-226.—*L.* figures of *alcon* figs. 3721-3726, *arion* and vars. 3727-3739, *arionides* 3740, *cyanecula* 3741-3743, *divina* 3744, OBERTHÜR Ét. Lép. comp. **13**.—*L. alcon, armoricana*, OBERTHUR pp. 390 and 411 Ét. Lép. Comp. **14**; *L. alcon*, natural history, POWELL pp. 393-419 T.c., *armoricana*, natural history POWELL pp. 420-460 T.c.: The group of *L. argus* allies, OBERTHÜR pp. 461-469 T.c.; *armoricana* and *aegon* eggs, pl. t.c. unnumbered; *armoricana* larva pl. 481 bis T.c.—*L. alcon* subspp. n. *haurii* and *tolistus* p. 24, *euphemus bajuvaricus* p. 25 and *thersandrus* p. 26, subspp. n., *arion antesion* subsp. n. p. 27, *jolas eurysthenes* and *protogenes* subspp. n. p. 31, FRUHSTORFER D. ent. Zs. Iris **31**. —*L. alexis*, varr., REVERDIN Bull. Soc. Lép. Genève **3** p. 189-192 pl. ix.—*L. argus, ligurica, armoricana*, characters, genitalia, REVERDIN pp. 17-30 2 pls. Ét. Lép. comp. **14**: *ligurica, idas, armoricana*, androconia, COURVOISIER T.c. p. 33-39—*L. arion*, larval habits, CHAPMAN pp. 315-321 Tr. ent. Soc. London **1916**.—*L. loewii* ab. n. *johannae* p. 86, ANDRES Bull. Soc. ent. Egypte **7**.—*L. lygdamus columbia* new race, SKINNER p. 213 Ent. News **28**.

Maiva sulphurea S. and K. is *Terias brigitta zoe*, TALBOT p. 140 Entomol. **50**.

Miletus stotharti **sp. n.** f. 17 *apelles major* subsp. n., New Guinea, ROTHSCHILD p. 34 Rep. B. O. U. exp. **2** No. 15, 1916.

Nacaduba proxima, subdubiosa, tristis, argioloides, **spp. n.** New Guinea p. 29, Rothschild T.c.

Pepliphorus hylas waigeuensis subsp. n. p. 220, Joicey & Talbot Ann. Nat. hist. **20.**—*P. nemophilina minor* subsp. n. p. 28, Rothschild Rep. B. O. U. exp. **2** No. 15, 1916.

Philiris aurelioides **sp. n.** p. 30, New Guinea, Rothschild T.c.

Philotes battoides, allies pp. 213-216, *spaldingi* **sp. n.** Utah p. 216 pl. xvi. figs. 9-11, genitalia pl. xvii, Barnes & McDunnough Contr. **3**, 1916.

Plebeius argus and vars. pp. 41 etc., genitalia pls. 1-20, *aegus* **sp. n.** p. 41, *sareptensis* **sp. n.** p. 52, Chapman Ét. Lép. comp. **14.**—*P. loewii joannae*, Graves p. 76 Bull. Soc. ent. Egypte **9.**

Polyommatus baeticus parasites, etc., Alfieri p. 22 Bull. Soc. ent. Egypte **9.**

Poritia hewitsoni, sexes, Ellis p. 116 J. Bombay Soc. **25.**

Rapala francesca, ♀, Swinhoe p. 158 Ann. Nat. hist. **20.**

Strymon sylvinus desertorum subsp. n., Grinnell p. 349 Canad. Ent. **49.**

Thysonotis wollastoni **sp. n.** N. Guinea p. 31, *phroso concolor* subsp. n. p. 32, Rothschild Rep. B. O. U. exp. **2** No.15, 1916.

Hesperiidae

Notes on N. American Hesperiidae, Barnes & McDunnough Contr. **3** pp. 120-137, 1916.

Abaratha syrichties var. n. *parvopunctata*, Mabille & Boullet p. 101 Bull. Soc. ent. France **1917.**

Acerbas albimedia **sp. n.** New Guinea p. 224, Joicey & Talbot Ann. Nat. hist. **20.**

Achlyodes nigropiceus p. 55, *amaurus, gambrus* p. 56, **spp. n.**, Amer. mer., Mabille & Boullet Bull. Soc. ent. France **1917.**

Adopea nova **sp. n.** Asia minor, Reverdin p. 122 pl. vii f. 1 Bull. Soc. Lép. Genève **3** 1916.

Anisochoria albida var. n. *bimaculata*, Mabille & Boullet Bull. Soc. ent. France **1917.**

Arteurotia contractipennis **sp. n.** Venezuela p. 243, Mabille & Boullet Bull. Soc. ent. France **1916.**

Atarnes sallei var. n. *angustemarginata*, Mabille & Boullet p. 100 Bull. Soc. ent. France **1917.**

Atelarina var. n. *lata* f. n. *cohaerens, crameri* **sp. n.** Colombia, Mabille & Boullet Bull. Soc. ent. France **1916.**

Biaka **gen. n.** near *Pirdana, albidiscus* **sp. n.** Schouten islds., Joicey & Talbot p. 225 Ann. Nat. hist. **20.**

Bolla nigerrima **sp. n.** Peru p. 99, Mabille & Boullet Bull. Soc. ent. France **1917.**

Camptopleura iphicrates var. n. *cincta*, Mabille & Boullet p. 97 T.c.

Carcharodus stauderi, orientalis, **spp. n.**, Reverdin p. 225 Bull. Soc. Lép. Genève **2** 1913.

Carrhenes callierges **sp. n.** Colombia p. 55, Mabille & Boullet Bull. Soc. ent. France **1917.**

Casyapa oetwakensis **sp. n.** p. 37 f. 13 New Guinea, *critomedia latifascia* subsp. n. p. 36, Rothschild Rep. B. O. U. exp. **2** No. 15 **1916.**—*C. swinhoei* **sp. n.** Waigeu, *critomedia waigeuensis* subsp. n., Joicey & Talbot p. 221 Ann. Nat. hist. **20.**

Celaenorrhinus sumatranus **sp. n.**, *eligius* var. n. *insidiosus, tibetanus* var. n. *latifascia, galenus* var. n. *alluaudi* p. 244, *opalinus* var. n. *jeanneli* p. 245, Mabille & Boullet Bull. Soc. ent. France **1916.**—*C. klossi, affinis* f. 2, **spp. n.**, New Guinea p. 37, Rothschild Rep. B. O. U. exp. **2** No. 15 1916.

Charidia leucaria var. n. *sulphurea*, Mabille & Boullet p. 100 Bull. Soc. ent. France **1917.**

Corone basalis **sp. n.** New Guinea p. 41 f. 25, Rothschild Rep. B. O. U. exp. **2** No. 15 1916.

Cycloglypha tisias var. n. *lucida*, Mabille & Boullet p. 97 Bull. Soc. ent. France **1917.**

Cyclosemia lineatopunctata **sp. n.** Peru p. 324, Mabille & Boullet Bull. Soc. ent. France **1916.**

Diphoridas palpalis var. n. *albescens, godmani* sp. n. Am. mer., MABILLE & BOULLET p. 97 Bull. Soc. ent. France **1917.**

Eagris sabadius var. n. *mauritiana* p. 246, MABILLE & BOULLET Bull. Soc. ent. France **1916.**

Eantis peruvianus sp. n. p. 58, MABILLE & BOULLET Bull. Soc. ent. France **1917.**

Ebrietas minor, leucophaea p. 59, *morio* p. 60, spp. n., Amer. mer., MABILLE & BOULLET T.c.

Echelatus heros, punctatus, spp. n., Guiana p. 324, MABILLE & BOULLET Bull. Soc. ent. France **1916.**

Eretis djaelaelae varr. n. *maculifera & punctigera, lugens* ab. n. *rotundimacula,* MABILLE & BOULLET p. 246 T.c.

Erynnis comma, its variations, var. *mixta* Alph. distinct pl. ix figs. 5 & 10 & pl. x f. 3, also *dimila* Moore pl. ix figs 4 & 12, REVERDIN Bull. Soc. Lép. Genève **3.**

Hasora infernalis f. 3, *simillima,* p. 42, *subcoelestis, postfasciata,* p. 43, spp. n., New Guinea, *doleschalii major* subsp. n. p. 41, ROTHSCHILD Rep. B. O. U. exp. 2 No. 15 1916.—*H. latifascia* Biak, *chalybeata* Waigeu, spp. n., p. 222, JOICEY & TALBOT Ann. Nat. hist. **20.**—*H. phileta,* valid, SWINHOE p. 410 Ann. Nat. hist. **19.**

Hesperia; species, genitalia, CHAPMAN pp. 93 etc. Ent. Rec. **29.**—*H. persica* sp. n., REVERDIN p. 218 figs. Bul. Soc. Lép. Genève **2.**—*H. radians* = (*Pamphila streckeri*), SKINNER p. 82 Ent. News **28.**

Hesperilla arfakensis sp. n. p. 223, JOICEY & TALBOT Ann. Nat. hist. **20.**

Hesperopsis arizonensis sp. n. p. 100, MABILLE & BOULLET Bull. Soc. ent. France **1917.**

Milanion parvus, tenuis, pilumnus with varr. *hemestinus & albidior,* p. 57, spp. n., Amer. mer., *marciana latior* var. n. p. 58, MABILLE & BOULLET T.c.

Mimene n. n. for *Mimas* de Nic. p. 225, *biakensis* p. 286, *wandammenensis, waigeuensis* p. 287, *viriditincta* Waigeu p. 288, spp. n., JOICEY & TALBOT Ann. Nat. hist. **20.**

Mylon lassia 3 varr. n. p. 54, *ozema* 2 varr. n., *melander* var. n. *albescens* p. 55, MABILLE & BOULLET Bull. Soc. ent. France **1917.**

Notocrypta tobrianda sp. n. p. 410, SWINHOE Ann. Nat. hist. **19.**—*N. angiana* sp. n. New Guinea p. 228, JOICEY & TALBOT Ann. Nat. hist. **20.**

Orthophoetus stotharti sp. n. New Guinea p. 36 f. 19, ROTHSCHILD Rep. B. O. U. exp. 2 No. 15 1916.

Padraona infralutea, fasciata, simillima, spp. n., New Guinea p. 39, ROTHSCHILD T.c.

Paramimus scurra, 4 varr. n., MABILLE & BOULLET p. 99 Bull. Soc. ent. France **1917.**

Pellicia maura, criton p. 322, *ruda,* Amer. mer., *rhamses* Panama, spp. n., *bromias* varr. n. *clara & nigra* p. 323, MABILLE & BOULLET Bull. Soc. ent. France **1916.**

Pholisora pirus var. n. *semicaeca,* MABILLE & BOULLET p. 100 Bull. Soc. ent. France **1917.**

Polytremis contigualis sp. n. New Guinea p. 41, ROTHSCHILD Rep. B. O. U. exp. 2 No. 15 1916.

Pythonides caeruleus, vicinus p. 320, *mimus* p. 321, spp. n., Amer. mer., *paterculus* f. n. *concolor* p. 320, MABILLE & BOULLET Bull. Soc. ent. France **1916.**

Sabera fusca, albicilla, spp. n., New Guinea p. 223, JOICEY & TALBOT Ann. Nat. hist. **20.**

Sarangesa hypoxanthina sp. n. E. Africa p. 246, MABILLE & BOULLET Bull. Soc. ent. France **1916.**

Saturapa thetys var. n. *lineata, phisara* var. n. *expansa,* MABILLE & BOULLET T.c.

Systasea atrivirgula sp. n. Peru p. 58, MABILLE & BOULLET Bull. Soc. ent. France **1917.**

Tagiades persimilis sp. n. p. 38 New Guinea, ROTHSCHILD Rep. B. O. U. exp. 2 No. 15 1916.—*T. nepos* var. n *guineensis, gana* varr. n. *niasana* and *elongata, nestus* var. n. *ternatensis,* MABILLE & BOULLET Bull. Soc. ent. France **1916** p. 245.

Tecupa **gen. n.** p. 410, *Astictopterinae, curiosa* **sp. n.** Naga hills p. 411, SWINHOE Ann. Nat. hist. **20.**

Telicota bambusae kiriwinia nov. SWINHOE p. 410 Ann. Nat. hist. **19.**— *T. klossi, germana, moorei, affinis,* **spp. n.,** New Guinea p. 40, *ternatensis novaeguineae* subsp. n. p. 41, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Telesto wollastoni, bicolor f. 29, **spp. n.,** New Guinea p. 38, ROTHSCHILD T.c.

Thanaos callidus synonymy, MCDUNNOUGH p. 232 Ent. News **28.**

Theagenes brunneofusca **sp. n.** Peru with var. *uniformis,* MABILLE & BOULLET p. 98 Bull. Soc. ent. France **1917.**

Vehilius norma p. 65, *sacchariphila* p. 66, **spp. n.,** Guiana, DYAR Insec. inscit. **5.**

Zopyrion sandace var. n. *disrupta,* MABILLE & BOULLET p. 100 Bull. Soc. ent. France **1917.**

Heterocera.

Synonymic notes on North-American Heterocera; BARNES and MCDUNNOUGH Contr. **3** pp. 157–208 pls. xii–xv, 1916. These notes cannot be summarised in a satisfactory manner in our pages.

CASTNIIDAE.

Castnia guyanensis p. 50 pl. i, *amazonensis* p. 51 pl. ii, *boliviensis, oberthueri,* pl. iii, p. 52, *amethystina* p. 54, *ambatensis* p. 55, *velutina* p. 56, *affinis, ecuadorensis* p. 57, *newmanni* (Guen.) p. 58, *albomaculata* p. 59 pl. iv f. 4, *macularifasciata* p. 61, *icaroides* p. 62, *jordani* p. 63, *evaltheformis* p. 64, *evalthonida* p. 66 pl. iv f. 5 with var. *flexifasciata* p. 67, *vicina, fusca,* p. 67, *rubrophalaris* p. 69, *briareus* p. 70, *pyrrhopygoides, palatinoides,* p. 72, *fuscorubra* p. 73, *lutea, strandi,* p. 75, *odila* p. 76, *candida* p. 77, *fulvofasciata* p. 80, *polopoides* p. 84, **spp. n.** Amer. mer.; *licoides* var. n. *rubromaculata* p. 60, *cronidia pebana, uruguayana cinerascens,* subspp. n. p. 79; HOULBERT Ét. Lep. comp. **13.**

Eupalamides grandis **sp. n.** Guiana p. 59, JORDAN Nov. Zool. **24.**

Gazera albicornis p. 80, *praedata* p. 82, *zagraeoides* p. 83 pl. iv f. 6, **spp. n.,** HOULBERT Ét. Lep. comp. **13.**

Megathymus yuccae, cafaqui, stephensi, SKINNER p. 232 Ent. News **28.**

AEGERIIDAE or SESIIDAE.

Revision of the characters of Aegeriidae, LE CERF Et. Lép. comp. **14** pp. 141–147 figs.

Some larval stages, RATTRAY pp. 5–7 Entomol. **50.**

Adixoa soror **sp. n.** Sikkim p. 253 f. 3143, LE CERF Ét. Lép. comp. **14.**

Aegeria vassei **sp. n.** Mozambique p. 337 f. 3939, LE CERF T.c.

Aegerina **gen. n.** p. 332 for *Aegeria ovinia* Druce, ♂ figured f. 3163, LE CERF T.c.

Aegerosphecia **gen. n.** p. 363, *calliptera* Batchian p. 364 f. 3193, *fulviventris* New Guinea p. 365 f. 3194, **spp. n.,** LE CERF T.c.

Albuna dybowskyi p. 324 f. 3938, *africana* p. 325 f. 3973, **spp. n.** Africa, LE CERF T.c.

Callisphecia **gen. n.,** *oberthueri* f. 3187, p. 367, *bicincta* p. 368 f. 3186, **spp. n.** Cameroons, LE CERF T.c.

Callithia **gen. n.** p. 248, *oberthueri* **sp. n.** New Grenada p. 249 f. 3138, LE CERF T.c.

Chamaesphecia minima Bogota p. 290 f. 3177, *clathrata* Congo p. 291 f. 3967, **spp. n.,** LE CERF T.c.

Chamanthedon **gen. n.** p. 287, *hypochroma* Burma p. 288 f. 3178, *xanthopleura* Trichinopoly p. 289 f. 3179, **spp. n.,** LE CERF T.c.

Dipsophecia teleta **sp. n.** Brazil p. 292 f. 3164, LE CERF T.c.

Episannina melanochalcia f. 3940, *ellenbergi* f. 3941, **spp. n.** Africa p. 319, LE CERF T.c.

Heterosphecia **gen. n.** p. 243, *myticus* **sp. n.** Assam p. 244 f. 3139, LE CERF T.c.

Hymenosphecia **gen. n.** p. 283, *albomaculata* **sp. n.** Uganda p. 284 f. 3957, LE CERF T.c.

Ichneumonoptera albiventris **sp. n.** Africa p. 318 f. 3948, LE CERF T.c.

Leptaegeria **gen. n.** p. 281, *flavocastanea* **sp. n.** Bolivia p. 282 f. 3162, LE CERF T.c.

Macrotarsipodes **gen. n.** p. 338, *tricinctus* Zululand p. 339 f. 3182, *grandidieri* Madagascar p. 341 f. 3951, *haugi* Congo p. 343 f. 3952, **spp. n.**, *sexualis* var. *waterloti* p. 341 f. 3954, LE CERF T.c.

Megalosphecia **gen. n.** p. 359, *gigantipes* **sp. n.** Cameroons p. 360 f. 3192 with var. *obscura* p. 361 f. 3191, LE CERF T.c.

Melanosphecia **gen. n.** p. 245, *atra* New Guinea p. 246 f. 3140, *bouvieri* Borneo p. 247 f. 3934, **spp. n.**, LE CERF T.c.

Melittia cucurbitae, satyriniformis, etc., pp. 150–161 pl. 175; *khmer* p. 161 f. 3916 Cambodia, *chimana* Ecuador p. 163 f. 3132, *funesta* Brazil p. 164 f. 3918, *hervei* Peru p. 166 f. 3919, *pauper* Lima p. 169 f. 3135, *madureae* Trichinopoly p. 170 f. 3111, *congoana* p. 172 f. 3112, *proxima* Sikkim p. 186 f. 3923, *marangana* Sumatra p. 188 f. 3116, *batchiana* p. 190 f. 3920, *distincta* p. 203 f. 3122 Assam, *tabanus* Tenasserim p. 205 f. 3128, *burmana* p. 206 f. 3124, *sulphureopyga* Chiriqui p. 208 f. 3125, *xanthopus* p. 209 f. 3127, *powelli* p. 210 f. 3924 Peru, *brabanti* Guiana p. 212 f. 3927, *josepha* Ecuador p. 214 f. 3126, *oberthueri* Iquitos p. 220 f. 3130, *louisa* Mexico p. 221 f. 3131, *boulleti* Mozambique p. 222 f. 3928, *victrix* Cameroons p. 224 figs. 3133 and 3134, *aethiopica* Abyssinia p. 227 f. 3929, *laboissierei* Uganda p. 229 f. 3930, *usambara* p. 231 f. 3965, *houlberti* Uganda p. 233 f. 3931, **spp. n.**; *natalensis* var. n. *occidentalis* Congo p. 167 f. 3917, *staudingeri* valid p. 173 f. 3123, *eurytion* variation figs. p. 178, *amboinensis* varr. n. *meeki* p. 195 f. 3121, *doddi* p. 196 figs. 3119 and 3120, *asiatica* and *javana* f. 3118 p. 197, with other figs. pp. 199, 200 and 201; LE CERF T.c.

Mellitina **gen. n.**, *nigra* **sp. n.** Brazil f. 3933, LE CERF p. 239 T.c.

Metasphecia **gen. n.**, *vuilleti* **sp. n.** Senegal f. 3949, LE CERF p. 335 T.c.

Myrmecosphecia lemoulti **sp. n.**, Guiana p. 375 f. 3958, LE CERF T.c.

Neosphecia **gen. n.** p. 236, *combusta* **sp. n.** Bolivia p. 237 f. 3137, LE CERF T.c.

Oligophlebia cristata **sp. n.** Java p. 273 f. 3159, LE CERF T.c.

Osminia **gen. n.** p. 327, *ferruginea* **sp. n.** Mexico p. 328 f. 3956, LE CERF T.c.

Paranthrene charlesi Papua p. 255 f. 3144, *limpida* Java p. 256 f. 3145, *zoneiventris* Burma p. 257 f. 3146, *davidi* Mou-Pin p. 259 f. 3936, *tristis* Annam p. 261 f. 3937, *henrici* Burma p. 262 f. 3147, *celebica* p. 264 f. 3148, *javana* f. 3149, *andamana* f. 3150 p. 265, *oberthueri* Batchian p. 267 f. 3153, *anthrax* Sierra Leone p. 270 f. 3154, **spp. n.**, LE CERF T.c.

Paranthrene cyanopis **sp. n.** New Guinea p. 166, DURRANT Rep. B.O.U. exp. 2 No. 15 1916.

Parasesia **gen. n.**, *cristallina* **sp. n.** Rio Janeiro f. 3161, LE CERF Ét. Lép. comp. **14.**

Phlogothauma oberthueri **sp. n.** Queensland p. 251 f. 3141, LE CERF T.c.

Proaegeria **gen. n.** p. 275, *vouauxi* **sp. n.** Cameroons p. 276 f. 3195, LE CERF T.c.

Premelittia **gen. n.** p. 234, *rufescens* **sp. n.** Bolivia p. 235 f. 3136, LE CERF T.c.

Pseudalcathoë **gen. n.** p. 320, *chitanayi* **sp. n.** Chiriqui p. 321 f. 3196, LE CERF T.c.

Pseudomelittia **gen. n.** p. 240, *berlandi* **sp. n.** E. Africa p. 241 f. 3932, LE CERF T.c.

Pyropteron chrysomelaena **sp. n.** Rio Janeiro p. 294 f. 3165, LE CERF T.c.

Sanninoidea exitiosa, BECKER pp. 49–59 J. econ. Ent. **10.**

Sesia formicaeformis, food-plant, HAYWARD p. 187 Entomol. **50.**

Stenosphecia **gen. n.** p. 285, *columbica* **sp. n.** Bogota p. 286 f. 3966, LE CERF Ét. Lép. comp. **14.**

Sura bicolor **sp. n.** Transvaal p. 271 figs. 3155 and 3156, LE CERF T.c.

Sylphidia pulchra p. 348 f. 3185, *modesta* p. 349 f. 3184, *pauper* p. 350 f. 3183, **spp. n.** Cameroons, LE CERF T.c.

Synanthedon subauratus Celebes p. 295 f. 3166, *versicolor* Sumatra p. 296 f. 3167, *flavostrigata* Mexico p. 298 f. 3946, *benoisti* Guiana p. 299 figs. 3944 and 3969, *guayanensis* p. 301 f. 3945 with var. *clara* p. 303 f. 3970, *maculiventris* Cameroons p. 304 f. 3168, *javanus* p. 305 f. 3181, *flavipectus* Parana p. 306 f. 3171, *germaini* Brazil p. 307 figs. 3172–3174, *iris* Cameroons p. 308 f. 3169, *dimorpha* Brazil p. 310 f. 3175, *autremonti* Minas Geraes p. 312 f. 3947, *concavifascia* Java p. 313 f. 3180, *tenuiventris* Java p. 314 f. 3170, spp. n., Le Cerf T.c.

Teleosphecia gen. n., *bibio* sp. n. Bolivia f. 3160, Le Cerf p. 280 T.c.

Tinthia spilogastra sp. n. Burma p. 370 f. 3158, Le Cerf T.c.

Trichocerota proxima sp. n. Burma p. 372 f. 3157, Le Cerf T.c.

Trilochana oberthueri Java p. 353 f. 3963 with var. *boulleti* p. 355, sp. n., Le Cerf T.c.

Vespanthedon gen. n. p. 329, *cerceris* sp. n. Mozambique p. 330 f. 3955, Le Cerf T.c.

Zenodoxus bicolor sp. n. Dahomey p. 372 f. 3968, Le Cerf T.c.

Sphingidae.

Figures of N. African Sphingidae previously dealt with in the Études, Oberthür Ét. Lép. comp. 13 pls. cccexiv–ccccxxvii pp. 35 and 36.

A swarm of *Sphingidae* Konkan coast, Fraser p. 155 J. Bombay Soc. 25.

Acherontia atropos, voice of larva, Willcocks p. 100 Bull. Soc. ent. Egypte 9; food-plant, Rowland-Browne p. 17 and p. 67 Entomol. 50.

Amorpha populi, intersex, Cockayne p. 343 Tr. ent. Soc. London 1916.

Amplypterus palmeri rubicundus pl. v f. 2, Closs p. 134 Ent. Mitt. 6.

Cechenena sumatrensis sp. n. p. 307, Joicey and Kaye Ann. Nat. hist. 20.

Celerio euphorbiae sinensis subsp. n. p. 34 Closs Ent. Mitt. 6; *C. euphorbiae extensa* pl. v. f. 3, Closs T.c.

Chaerocampa elpenor, food-plant, Scorer p. 208 Entomol. 50.

Daphnis nerii, larval history, Scott p. 113 Entomol. 50.

Deilephila livornica, larva habits, Scott p. 156 J. Bombay Soc. 25.

Dilina tiliae, on oak, Ford p. 164 Entomol. 50.

Hippotion rubribrenna sp. n. New Guinea, Joicey and Kaye Ann. Nat. hist. 20.

Marumba irata sp. n. Tibet p. 305, Joicey and Kaye Ann. Nat. hist. 20.

Oligographa mosambiquensis sp. n. p. 305, Joicey & Kaye T.c.

Oxyambulyx cyclasticta Burma p. 308, *citrona* India p. 309, spp. n., Joicey & Kaye T.c.

Platysphinx phyllis, ♂, Closs p. 33 Ent. Mitt. 6.

Polyptychus lapidatus sp. n. Coomassie p. 230 pl. viii figs. 1 and 2; *olivolinea* sp. n. Cameroons p. 308, Joicey & Kaye Ann. Nat. hist. 20.

Protoparce vestalis sp. n. Pará p. 59, Jordan Nov. zool. 24.

Psilogramma menephron fasciata pl. v. f. 1, Closs p. 134 Ent. Mitt. 6.

Smerinthus planus meridionalis subsp. n. p. 133, Closs T.c.

Sphinx convolvuli, occurrences in Scotland, Scott Nat. 1917 pp. 289–292.—*S. ligustri*, food-plant, Wales p. 237 Entomol. 50.

Thibetia gen n. near *Angonyx*, *niphaphylla* sp. n. Thibet pl. viii f. 3, Joicey & Kaye Ann. Nat. hist. 20.

Xylophanes sublaevis sp. n. Brazil p. 306, Joicey & Kaye T.c.—*X. hannemanni* sp. n. Mexico p. 33, Closs Ent. Mitt. 6.—*X. alegrensis* f. 4, *hannemanni* f. 5, p. 135; *X. heinrichi* p. 133 fig., *pallescens* p. 134, spp. n. Amer. mer., Closs Ent. Mitt. 6.

Bombyces, s.l., including Hepialidae, Psychidae, etc.

Oberthür gives part 3 of Lépidoptères de Barbarie, including Arctiidae, Lithosiidae, Nolidae Cymbidae, Hepialidae, Cossidae; Ét. Lep. comp. 13 pp. 7–44; the 21 accompanying plates deal in larger part with species studied in previous fascicles of the work.

Oberthür on Cossidae, review by CHAPMAN Ent. Rec. **29** p. 3.

OBERTHÜR gives figures of North African Bombyces previously listed in the Études; Ét. Lep. comp. **13** pls. 418–427.

Descriptions of new Notodontidae, ROTHSCHILD Nov. Zool. 24 pp. 231–264 pls. iii–viii. All the species are figured though this is not mentioned in the text.—DOGNIN gives synonymy in connection with this paper; Hétér. 12 pp. 4 and 5.

South African Bagworms; their transformations, life-history, and economic importance, HARDENBERG Ann. Natal Mus. **3** p. 619–686 pls. xliv–xlvi.

Longevity in Saturniid moths and its relation to the function of reproduction, RAU & RAU St. Louis Trans. Ac. **23** 1914 p. 1–78 pls. i–v.

Abrochia sodalis Cayenne, *igniceps* Peru, **spp. n.** p. 125, DRAUDT Seitz Fauna exot. americ. **6**, 1915.

Acanthopsyche (*Melisa*) *alba* p. 598 pl. xliii fig. 4; *A.* (*Oeceticoides*) *tristis* p. 597 pl. xliii fig. 3. **spp. n.**, JANSE, Ann. Natal mus. **3** 1917.

Acrojana splendida **sp. n.** Gold Coast p. 492, ROTHSCHILD Nov. zool. **24**.

Aethria paulista, lepida, **spp. n.** Amer. mer. p. 115, DRAUDT Seitz Fauna exot. americ. **6**, 1915.

Aglia tau, pupa, LJUNGDAHL Ent. Tidskr. **38** pl. ii. figs. 12, 17.

Amaxia maroniensis **sp. n.** Guiana p. 477, ROTHSCHILD Nov. zool. **24**.

Amsacta annamensis p. 411, *barbara* Babber isld., *saduca* Madras, p. 412, **spp. n.**, SWINHOE Ann. Nat. hist. **20**.

Anita gigas **sp. n.** Amazons p. 256, ROTHSCHILD Nov. zool. **24**.

Antaea pseudosmerinthus **sp. n.** Amazons p. 263, ROTHSCHILD T.c.

Antaxia similis **sp. n.** Amer. mer. p. 479, ROTHSCHILD T.c.

Anthrocera filipendulae, variations, BROWN pp. 131, 132 Lancash. Nat. **10**.

Antiora affinis **sp. n.** hab. (?) ROTHSCHILD p. 232 Nov. zool. **24**.

Apantesis else **sp. n.** Algeria p. 438, NISSEN Nov. zool. **24**.—*A. nais*, and allies, MARCHAND p. 59, Psyche **24**.

Apella acutidivisa, opalis, **spp. n.** Amer. mer. p. 262, ROTHSCHILD Nov. zool. **24**.

Apona frater **sp. n.** Assam p. 487, *cashmeriensis major* subsp. n. p. 486, ROTHSCHILD T.c.

Apterona fragilis **sp. n.** Arizona p. 34 pl. iii. f. 21, BARNES & MCDUNNOUGH Contr. **3**, 1916.

Arctia caja, japanese larva pl. ii. figs. 10-13 p. 242, WILEMAN Philipp. J. Sci. D **12**.

Arhacia postbrunnea **sp. n.** Guiana p. 238, ROTHSCHILD Nov. zool. **24**.

Asota wollastoni **sp. n.** New Guinea p. 78, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15, 1916.

Asura dentiferoides **sp. n.** N. Guinea p. 49, ROTHSCHILD T.c.

Autochloris proterva, flavipes, p. 15, *suffumata* p. 52, **spp. n.** Amer. mer., DRAUDT Seitz Fauna exot. americ. **6**, 1915.

Automolis decisa, sublineata, perlineosa, p. 480, *soror* p. 481, **spp. n.** Amer. mer.; *reducta sordida* p. 480, *garleppi maronensis, moma tenuifascia*, p. 481, subspp. n.; ROTHSCHILD Nov. zool. **24**.

Baradesa omissa **sp. n.** Assam. p. 258, ROTHSCHILD T.c.

Bardaxima molossus, castaneobrunnea, **spp. n.** Amer. mer. p. 234, ROTHSCHILD T.c.—*B. castaneo-brunnea*, synonymy, DOGNIN p. 4, Hétér. **13**.

Callimorpha dominula in Devon, PERKINS J. Torquay Nat. Hist. Soc. **2** p. 142.

Camarunia bipartita **sp. n.** Niger p. 491, ROTHSCHILD Nov. zool. **24**.

Caprimima perimitatrix **sp. n.** p. 47 New Guinea, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15, 1916.

Cargetta albostigmata Goodenough isld., *flavibasis*, p. 256, *bipuncta* p. 257, New Guinea, **spp. n.**, ROTHSCHILD Nov. zool. **24**.

Cargida pyrrha intensa subsp. n. p. 232, ROTHSCHILD T.c.

Carthara intranea, ♀, DOGNIN p. 4 Hétér. 13.

Cascera albiscripta p. 246 with subsp. *virens*, *marginata*, *flavovirens*, p. 247, *irrorata* with subsp. *pallida*, *perscripta*, *variegata*, p. 248, spp. n., *olivacea olivacea* p. 247 and *o. flavolavata*, subspp., p. 248, New Guinea, ROTHSCHILD Nov. zool. 24.

Cercocladia gen. n. near *Rhynchopyga*, *novicia* sp. n. Cuyaba, DRAUDT, p. 91 Seitz Fauna exot. americ. 6, 1915.

Celama irrorata, *roseolactea*, spp. n. New Guinea p. 44, ROTHSCHILD Rep. B.O.U. exp. 2 No. 15, 1916.

Cerura bifida interspersa subsp. n. p. 348, ROTHSCHILD Nov. zool. 24.

Chadisra albobrunnea Assam, *meeki*, p. 251, *striata* with subsp. *divisa* New Guinea, *plagosa* Niger, p. 251, spp. n., ROTHSCHILD T.c.

Chelonomorpha japona pl. i. f. 1 p. 229 larva, WILEMAN Philipp. J. Sci. D 12.

Chliora mediostriga sp. n. Guiana p. 263, ROTHSCHILD Nov. zool. 24.

Chlorostyla phyllis sp. n. Guatemala p. 104, GIBBS Pr. S. Lond. ent. Soc. 1916-17.

Chrostosoma chrysiridia, *fassli*, Columbia p. 68, spp. n., DRAUDT Seitz Fauna exot. americ. 6, 1915.

Chrysasura wollastoni, *meeki*, f. 47, spp. n. New Guinea p. 48, ROTHSCHILD Rep. B.O.U. exp. 2 No. 15, 1916.

Chrysocneme gen. n. near *Macrocneme* p. 204, *mirabilis* Columbia, *uniforis* Bogota, spp. n. p. 205, DRAUDT Seitz Fauna exot. americ. 6.

Cicinnus alboflava sp. n. Brazil p. 17 DOGNIN Hétér. 13.

Cispia kinabaluensis, *borneensis*, spp. n. p. 329, STRAND Seitz Fauna exot. Indo-austr. 10.

Cisthene monon Venezuela, *chorion*, p. 9, *tehuacana*, *abdulla*, p. 10, Mexico, spp. n. DYAR Insec. inscit. 5.

Clania moddermani Heyl. p. 592 pl. xliii fig. 1, JANSE Ann. Natal Mus. 3.

Cleis affinis sp. n. New Guinea p. 108, ROTHSCHILD Rep. B.O.U. exp. 2 No. 15 1916.

Colussa odontogrammata sp. n. New Guinea p. 56 pl. iii f. 14, JOICEY & TALBOT Ann. Nat. hist. 20.

Comella obscurior sp. n. New Guinea p. 108 figs. 49 and 50, ROTHSCHILD Rep. B.O.U. exp. 2 No. 15 1916.

Coreura albicosta Mexico, *alcedo* hab. (?), *egregia* Bolivia p. 209, spp. n. DRAUDT Seitz Fauna exot. americ. 6 1915.

Correbia intermedia Bolivia p. 185, *negrona* Columbia p. 216, spp. n., DRAUDT T.c.

Cosmosoma regestum, *exsors*, spp. n. Columbia p. 82, DRAUDT T.c.

Cotana bisecta p. 468, *brunnescens*, *pallidipascia*, p. 469, *variegata*, *meeki*, p. 470, *rosseliana* p. 471, *affinis* p. 472, *germana* p. 474, spp. n. New Guinea; also the following subspp. n., *lunulata occidentalis*, *l. satisbona*, p. 471, *rosseliana diluta*, *erectilinea setakwensis*, p. 472, *kebeae grandis*, *rubrescens kapaura*, p. 473, *r. oetakwensis* p. 474; ROTHSCHILD Nov. zool. 24, figures on pls. xi and xii.

Cotana castaneorufa sp. n. New Guinea p. 79, ROTHSCHILD Rep. B.O.U. exp. 2 No. 15 1916.

Crambidia myrlosea sp. n. Texas p. 67, DYAR Insec. inscit. 5.

Crinodes schausi sp. n. Amer. Centr., *striolata fuscipennis* and *s. insularis* subspp. n., ROTHSCHILD p. 235 Nov. zool. 24.

Ctenucha conchyliata sp. n. Peru p. 192, DRAUDT Seitz Fauna exot. americ. 6 1915.

Dasychira alboschistacea f. 43, *plagosa*, spp. n. New Guinea p. 77, ROTHSCHILD Rep. B.O.U. exp. 2 No. 15 1916.—*D. ignotana* sp. n. New Guinea (?) p. 298, STRAND Seitz Fauna exot. Indo-austr. 10.—*D. multilineata* sp. n. Formosa p. 160, SWINHOE Ann. Nat. hist. 20. —*D. nachiensis* sp. n. Japan, MARUMO Essays Nawa p. 23–37.

Dasychiroides obsoleta ♀ pl. i f. 14 p. 58, JOICEY & TALBOT Ann. Nat. hist. **20.**

Datana diffidens **sp. n.** Texas p. 67, DYAR Insec. inscit. **5.**

Deilemera luzonica, purata, **spp. n.** Philippines p. 335, SWINHOE Ann. Nat. hist. **19.**—*D. paradelpha* Fergussen isld., *bouruana* Bura p. 411, *externa* Batjan p. 412, *genora, similis,* New Guinea p. 413, *poliodesma* New Britain, *homogona* Annam p. 414, *perissa* Obi, *delocyma,* Flores p. 415, **spp. n.,** *cenis parva* nov. Formosa p. 414, SWINHOE T.c.—*D. kiriwana* Trobriand islds., *latera* Formosa p. 159, *everetti* Flores p. 160, **spp. n.,** SWINHOE Ann. Nat. hist. **20.**

Delphyre lemoulti Cayenne p. 166, *spreta* Columbia p. 167, **spp. n.,** DRAUDT Seitz Fauna exot. americ. **6** 1915.

Dendrolimus ochroleucus, iwasakii, **spp. n.,** NAGANO Bull. Nawa Ent. Lab. **2** p. 1–45 pls.

Diacrisia hampsoni Nilgiri hills p. 243, *alberti, persimilis, hypsoides,* New Guinea p. 246, *wilemani* Formosa p. 249, ROTHSCHILD Seitz Fauna exot. Indo-austr. **10.**—*D. ochrifrons* **sp. n.** New Guinea p. 50 pl. i f. 2, JOICEY & TALBOT Ann. Nat. hist. **20.**—*D. oriens* p. 482, *nigrocastanea* Africa, *eichhorni* Goodenough isld. p. 483, **spp. n.,** ROTHSCHILD Nov. zool. **24.**—*D. subcarnea* larva pl. ii f. 1 p. 234, *nivea* pl. i f. 8 p. 236, *impariles* f. 10 p. 237, *infernalis* pl. ii figs. 29 p. 239, larva, *infernalis maculalis* and *immaculalis* varr. n. p. 240, WILEMAN Philipp. J. Sci. D. **12.**

Diptilum culex **sp. n.** Brazil p. 120, DRAUDT Seitz Fauna exot. americ. **6** 1915.

Drugera pallidiflava Peru, *muscosa* Trinidad, **spp. n.** p. 239, ROTHSCHILD Nov. zool. **24.** This is *Hamidonta unca* D., DOGNIN p. 5 Hétér. **13.**

Drymonia basalis **sp. n.** Japan p. 28, WILEMAN & SOUTH Entomol. **50.**

Dyasia stigmatica, melanoleuca, punctata, **spp. n.** Amer. mer. p. 236, ROTHSCHILD Nov. zool. **24.**

Dylomia nubiloviolacea **sp. n.** Guiana p. 262, ROTHSCHILD T.c. This is *fragilis* Sch., DOGNIN p. 5 Hétér. **13.**

Dyspessa affinis **sp. n.** Algeria p. 408, *ulula pallida* p. 407, *marmorata maroccana* p. 408, subspp. n., ROTHSCHILD Nov. zool. **24.**

Elysius subterra, meridionalis, underwoodi, **spp. n.** Amer. mer., *francki castrensis* subsp. n., ROTHSCHILD p. 481 T.c.

Empyreuma anassa **sp. n.** Jamaica p. 343, FORBES Bull. Amer. Mus. **37.**

Eragisa basifera Guiana, *tenebrosa* Panama, **spp. n.** p. 234, ROTHSCHILD Nov. zool. **24.**

Eriostepta pseudamaxia **sp. n.** Guiana p. 477, ROTHSCHILD T.c.

Eriphioides ecuadoriensis **sp. n.** p. 132, DRAUDT Seitz Fauna exot. americ. **6** 1915.

Euagra seraphica, perpasta, **spp. n.** Columbia p. 210, DRAUDT T.c.

Eucereon leopardinum Peru p. 174, *simile* Am. mer., *compositum* hab. (?) p. 178, *ecuadoris* p. 181, *rothschildi* p. 184, *facundum, fassli,* Colombia *wernickei* Brazil, p. 213, *assutum* Bolivia, *colombiae, seitzi* Bolivia, *crambidinum* Colombia, p. 214, *perplicatum* Brazil, *insitivum, sarisa,* Colombia, p. 215, **spp. n.,** DRAUDT T.c.

Eudeilinea luteifera **sp. n.** Texas p. 68, DYAR Insec. inscit. **5.**

Eugoa quadriplagiata **sp. n.** New Guinea p. 49, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15. 1916.

Euhampsonia magnifica **sp. n.** New Guinea, *niveiceps occidentalis* subsp. n., ROTHSCHILD p. 258 Nov. zool. **24.**

Euproctis celebesicola p. 341, *cina,* Borneo p. 342, **spp. n.,** STRAND Seitz Fauna exot. Indo-austr. **10.**—*E. postfusca* **sp. n.** Formosa p. 146, WILEMAN & SOUTH Entomol. **50.**—*E. aurantiicolor, bisecta* f. 53, *nebulosa* f. 72, *postbicolor* f. 33, *fusca,* p. 75 **spp. n.** New Guinea, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15, 1916. —*E. chlorospila* pl. i. f. 8, *acrita* f. 10, p. 55, *chlora* f. 11, *semirufa* f. 9, p. 56, **spp. n.** New Guinea, JOICEY & TALBOT Ann. Nat. hist. **20.**—*E. servilis,* synonymy, distribution, SWINHOE p. 336

Ann. Nat. this. **19.**—*E. chrysorrhoea* larva, poison glands, KEPHART J. Parasitol Urbana **1** 1914 p. 95-103 ff. 1-4.

Eutane terminalis, life-history p. 892 figs., FROGGATT Agric. Gaz. N.S.W. **28.**

Felderia subpura **sp. n.** New Guinea p. 108, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15, 1916.

Fumea obscurata p. 615 **sp. n.** MEYRICK Ann. Natal Mus. **3.**—*F* (?) *taiwana* **sp. n.** Formosa p. 147, WILEMAN & SOUTH Entomol. **50.**—*F. servicula* **sp. n.** India p. 92, MEYRICK Exot. Micr. **2.**

Gargetta melanosticta **sp. n.** New Guinea p. 61 pl. ii. f. 5, JOICEY & TALBOT Ann. Nat. hist **20.**

Gastroplakaeis flaveola **sp. n.** Senegal p. 130 pl. v. f. 7, CLOSS Ent. Mitt. **6.**

Gunda flavolivacea **sp. n.** New Guinea p. 101, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.

Gymnelema stygialis pl. xliii. f. 8, *vinctus* p. 608 f. 10, cases; *G. imitata* p. 610 pl. xliii. f. 9 **sp. n.** JANSE Ann. Natal Mus. **3.**

Halisidota luridioides Colombia, *pseudofalacra* Nicaragua, **spp. n.**, ROTHSCHILD p. 482 Nov. zool. **24.**—*H.*, **spp.** SWAINE figs. Agric. Gaz. Canada **4** pp. 1043-1047.—*H. caryas*, ISELY Bull. **598** U. S. Dep. Agric. Ent. 3 pls.

Hapigia rufocinnamomia **sp. n.** Guiana p. 263, ROTHSCHILD Nov. zool. **24.**

Hapigiodes klagesi **sp. n.** Amazons p. 264, ROTHSCHILD T.c.

Haplojana insignifica, roseobrunnea, soricis, abyssinica, p. 489, *distincta* p. 490, **spp. n.** Africa, ROTHSCHILD T.c.

Heliura mimula **sp. n.** Bolivia p. 212, DRAUDT Seitz Fauna exot. Americ. **6.**

Hemijana ruberrima, griseola, variegata, **spp. n.** Africa p. 490, ROTHSCHILD Nov. zool. **24.**

Heterusia venus **sp. n.** New Guinea p. 106 figs. 38 and 74, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.

Histiaea peruviana, excreta, **spp. n.** Peru p. 102, DRAUDT Seitz Fauna exot. americ. **6**, 1915.

Holoreta leucospila **sp. n.** New Guinea p. 82 pl. iii. f. 12, *flavobscura* f.n. p. 83, JOICEY & TALBOT Ann. Nat. hist. **20.**

Homoeocera staminea p. 45, *modesta, janthina*, p. 197, **spp. n.** Bolivia, DRAUDT Seitz Faun. exot. americana **6**, 1915.

Hoplitis cinnamomea New Guinea, *insignifica* Daminer Isld., *dasychiroides*, p. 250, *curvatula* p. 251, Africa, **spp. n.**, ROTHSCHILD Nov. zool. **24.**

Horamella **gen. n.** near *Horama, fassli* **sp. n.** Colombia, DRAUDT p. 145 Seitz Fauna exot. americ. **6**, 1915.

Hyponerita curta **sp. n.** Guiana p. 479, ROTHSCHILD Nov. zool. **24.**

Hypsa lara to *Aganais* = (*intacta* var. Sn.), SWINHOE p. 333 Ann. Nat. hist. **19.**

Ichoria improcera Panama, *maura* Venezuela, **spp. n.** p. 86, DRAUDT Seitz Fauna exot. americ. **6**, 1915.

Ichthyura castanea **sp. n.** New Guinea p. 80 f. 60, ROTHSCHILD Rep. B. O. U. esp. **2** No. 15, 1916.

Idalus albidior p. 475, *affinis* p. 476, **spp. n.** Amer. mer., ROTHSCHILD Nov. zool. **24.**

Ilema griseola, larva, pupa, pl. i. figs. 6 and 7, p. 231, WILEMAN Philipp. J. Sci. D **12.**

Illice sexalata p. 257, *lycomorphodes* p. 260, **spp. n.** Bolivia, DRAUDT Seitz Fauna exot. americ. **6.**

Imaus cinnamomima **sp. n.** New Guinea p. 77, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.—*I. nepha* p. 57 pl. i f. 12, *basistriga* p. 58 f. 13, **spp. n.** New Guinea, JOICEY & TALBOT Ann. Nat. hist. **20.**

Isanthrene pertexta **sp. n.** Brazil p. 197, DRAUDT Seitz Faun. exot. americ. **6.**

Ixylasia trogon **sp. n.** Colombia p. 209, DRAUDT Seitz Fauna exot. americ. **6.**

Jana pseudostrigina, roseata, p. 487, *aurivilliusi, variegata, germana*, p. 488, **spp. n.** Africa, ROTHSCHILD Nov. zool. **24.**

Kakivora flavofasciata Nagano, Metamorphosis (Japanese), NAGANO Konchu-Sek. Gifu **21** pp. 10–14.

Konjikia **gen. n.** *Drepanidae*, NAGANO Bull. Nawa Ent. Lab. **2** 1917 (1–45).

Kunugia **gen. n.** *Lasiocampidae, yamadai* **sp. n.**, NAGANO Bull. Nawa ent. Lab. **2** pp. 1–45, pls.

Lambessa decolorata albescens p. 366 subsp. n., ROTHSCHILD Nov. Zool. **24.**

Lasioceros dentilinea **sp. n.** New Guinea p. 63 pl ii f. 6, JOICEY & TALBOT Ann. Nat. hist. **20.**

Lasiomorpha meeki **sp. n.** New Guinea p. 466, ROTHSCHILD Nov. Zool. **24.**

Lentagena rufiflava **sp. n.** Guiana p. 15, DOGNIN Hétér. **13.**

Lepasta bractea gigantea subsp. n. p. 235, ROTHSCHILD Nov. Zool. **24.**—*L. bractea g.* = *L. b. majorina* D., DOGNIN p. 4 Hétér. **13.**

Leucodrepana serratilinea **sp. n.** Formosa p. 147, WILEMAN & SOUTH Entomol. **50.**

Leucodrepanilla **gen. n.** *Drepanidae*, NAGANO Bull. Nawa Ent. Lab. **2** pp. 1–45 with 10 pls.

Leucoma seminsula Hongkong p. 309, *singaporensis* p. 310 **spp. n.**, STRAND Seitz Fauna exot. Indo-austr. **10.**

Lirimiris guatemalensis, chimaera, lemoulti, p. 237, *mirabilis* p. 238, Amer. mer. **spp. n.**, *elongata postpallida* and *e. orientalis* subspp. n. p. 240, *euribya* distinct p. 239, ROTHSCHILD Nov. Zool. **24.**

Lithosia lutarella var. n. *postmelanica* p. 299, STRAND Ent. Mitt. **6.**

Lithosiidae; revision of algerian, OBERTHÜR Ét. Lép. comp. **13** pp. 17–24, figs. 3752–3766.

Loxomima **gen. n.** near *Loxophlebia, imitans* **sp. n.** Brazil, DRAUDT p. 146 Seitz Fauna exot. Americ. **6** 1915.

Loxophlebia asseda p. 62, *austera* p. 63, Santos, *parea, senta*, p. 64 Colombia, **spp. n.**, DRAUDT T.c.

Lycomorphodes splendida **sp. n.** Colombia p. 253, DRAUDT Seitz Faun. exot. americ. **6.**

Lymantria variegata, nigrita, fusca, griseata, **spp. n.** New Guinea p. 76, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.—*L. nudala* hab. (?) p. 320, *ganaroides* New Guinea (?) p. 325, **spp. n.**, STRAND Seitz Faun. exot. Indo-austr. **10.**—*L. monacha*, pupa, LJUNGDAHL Ent. Tidskr. **38** pl. ii fig. 1.

Lymire candida Jamaica p. 344, *senescens* Porto rico p. 345, **spp. n.**, FORBES Bull. Amer. Mus. **37.**

Macuduma sordidescens, umbrina, recurva, **spp. n.** New Guinea p. 46, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.—*M. rothschildi* **sp. n.** Queensland p. 190, DRAUDT Seitz Faun. exot. Indo-austr. **10.**

Macronadata brunnea **sp. n.** Lado p. 259, ROTHSCHILD Nov. Zool. **24.**

Macrothylacia rubi, rearing, NEWMAN p. 58 Entomol. **50.**

Malacosoma franconica brunneoolivacea subsp. n. p. 361, ROTHSCHILD Nov. Zool. **24.**—*M. neustria*, pupa, LJUNGDAHL Ent. Tidskr. **38** pl. ii fig. 6.—*M. neustria* var. *brunnea*, larva, etc., HAMMOND Proc. Croydon Soc. **8** pp. **133–135.**

Malmella **gen. n.** *Megalopygidae*, type *strigiprima* D., DOGNIN p. 19 Hétér. **13.**

Malocampa bucephaloides, phaleroides, **spp. n.** Amér. mer. p. 249, ROTHSCHILD Nov. zool. **24.**

Maschane costipuncta **sp. n.** Amazons p. 262, ROTHSCHILD T.c.; this is *frondea* Sch., DOGNIN p. 5 Hétér. **13.**

Melanergon vidua fergussonis and *louisiadensis* subspp. n., ROTHSCHILD p. 467 Nov. Zool. **24.**

Melanothrix intermedia Mergui Arch. p. 464, *semperi* Philippines p. 465, **spp. n.**, *nymphaliaria albidior* and *philippina*, subspp. n. p. 463, ROTHSCHILD T.c.

Meragisa arida Schaus = (*Eragisa basifera* R., as above), DOGNIN p. 4 Hétér. **13.**

Mesothen roseifemur **sp. n.** Colombia p. 66, DRAUDT Seitz Fauna exot. americ. **6**, 1915.

Metalobosia postflavida p. 256, *similis* p. 257 **spp. n.** Colombia, DRAUDT T.c.

Metanastria digramma curvifascia and *parallelifascia* subspp. n. p. 453, ROTHSCHILD Nov. zool. **24.**

Miacora roseobrunnea **sp. n.** Guiana p. 16, DOGNIN Hétér. **13.**

Miltochrista javana p. 135, *rothschildi* Assam p. 137, **spp. n.**, DRAUDT Seitz Faun. exot. Indo-austr. **10.**

Monda delicatissima Walk. p. 603 pl. xliii. fig. 7, JANSE Ann. Natal. mus. **3.**

Moresa hieroglyphica, obliquifascia, plumbeiplaga, **spp. n.** Amer. mer. p. 261, ROTHSCHILD Nov. zool. **24.**—This is *Rosema magniplana* Sch., DOGNIN p. 5, Hétér. **13.**

Napata banghaasi Brazil, *lisita* Ecuador, p. 139, *abbreviata* Bolivia p. 140, **spp. n.**, DRAUDT Seitz Faun. exot. americ. **6**, 1915.

Naprepa fusconubilata, adusta, **spp. n.** Amer. mer. p. 231, ROTHSCHILD Nov. zool. **24.**

Narasodes hampsoni **sp. n.** Borneo p. 191, DRAUDT Seitz Fauna exot. Indo-austr. **10.**

Neidalia irrorata **sp. n.** Peru p. 475, ROTHSCHILD Nov. zool. **24.**

Neritos subgaudialis **sp. n.** Guiana p. 479, ROTHSCHILD T.c.

Norvicompressa bakeri **sp. n.** New Guinea p. 65 pl. iii. f. 15, JOICEY & TALBOT Ann. Nat. hist. **20.**

Nesiotica **gen. n.** near *Goniosema, cladara* **sp. n.** Norfolk Island, TURNER Trans. R. Soc. S. Australia **41** pp. 54-55.

Norape subdelineata p. 17, *divisata* p. 18, **spp. n.** Colombia, DOGNIN Hétér. **13.**

Notoplusia distinguenda **sp. n.** Amazons p. 240, ROTHSCHILD Nov. zool. **24.**—This is *Chadisra flavodiscata* D., DOGNIN p. 5 Hétér. **13.**

Nyctemera nesites, biserrata, Sumatra, **spp. n.**, p. 269 SEITZ Faun. exot. Indo-austr. **10.**

Nystalea nigriplaga p. 232, *cossoides, zeuzeroides, ocellata*, p. 233, **spp. n.** Amer. mer. ROTHSCHILD Nov. zool. **24.**

Ocnogyna adaena pallida subsp. n. p. 395, ROTHSCHILD T.c.

Oenetus wollastoni **sp. n.** New Guinea p. 146 f. 56, *marginatus saturatior* subsp. n. p. 145, ROTHSCHILD Rep. B. O. U. exp. 2 No. 15, 1916.

Olapa nigribasis **sp. n.** p. 185, JANSE Ann. S. afric. mus. **17.**

Omichlis parallelistriga **sp. n.** New Guinea p. 80, ROTHSCHILD Rep. B. O. U. exp. 2 No. 15, 1916.—*O. pseudolibatrix, plusiotis*, p. 259, *mediofasciata* p. 260, **spp. n.** New Guinea, ROTHSCHILD Nov. zool. **24.**—*O. leucosticta* pl. ii f. 4, *plagiosa* f. 3, **spp. n.** New Guinea p. 62, JOICEY & TALBOT Ann. Nat. hist. **20.**

Opharus catharinae **sp. n.** Amer, mer. p. 482, ROTHSCHILD Nov. zool. **24.**

Opsirhina melanacra **sp. n.** New Guinea p. 82 pl. ii. f. 8. JOICEY & TALBOT Ann. Nat. hist. **20.**

Oreta trogoptera **sp. n.** New Guinea p. 109, ROTHSCHILD Rep. B. O. U. exp. 2 No. 15, 1916.

Osmocnema **gen. n.** near *Schasiura, bracata* **sp. n.** Colombia, DRAUDT p. 209, Seitz Fauna exot. americ. **6.**

Pachychira excellens, olivaceofusca, **spp. n.** New Guinea p. 260, ROTHSCHILD Nov. zool. **24.**

Pachypasa limosa intermedia subsp. n. p. 370, ROTHSCHILD T.C.

Pachytelia unicolor, pupa, LJUNGDAHL Ent. Tidskr. **38** pl. ii. fig. 13.

Padenia unifascia **sp. n.** New Guinea p. 46, ROTHSCHILD Rep. B. O. U. exp. 2 No. 15, 1916.

Palerisa sinensis **sp. n.** p. 486, ROTHSCHILD Nov. zool. **24.**

Pandala pandaya niassana subsp. n. p. 486, ROTHSCHILD T.c.

Paracydas postpallida **sp. n.** New Guinea p. 468, ROTHSCHILD T.c.

Paradinia **gen. n.** neat *Dinia, chrysogastrides* **sp. n.** Colombia, DRAUDT p. 110 Seitz Fauna exot. americ. **6** 1915.

Paraethria mapiria **sp. n.** Bolivia p. 116, DRAUDT T.c.

Paramevania **gen. n.**, *inconspicua* **sp. n.** hab. ? DRAUDT p. 161 T.c.

Paranerita postrosea p. 477, *diversa, plagosa, translucida, kennedyi*, p. 478, *rubrosignata* p. 479, **spp. n.**, Amer. mer., ROTHSCHILD Nov. zool. **24.**

Parascraptia insignifica **sp. n.** New Guinea p. 46, ROTHSCHILD Rep. B. O. U. exp. 2 No. 15 1916.

Parasemia plantaginis, varieties, DEMAISON Bull. Soc. ent. France **1917** pp. 255–258.

Phalera elongata Assam, *postaurantia, inexpectata*, Africa, **spp. n.**, p. 253, ROTHSCHILD Nov. zool. **24.**

Phasicnecus monteironis, giganteus, p. 491, *peropalinus, nivalis*, p. 492, **spp. n.**, Africa, *similis* subsp. n. *flavidior*, p. 491, ROTHSCHILD T.c.

Pheia regesta Matto-grosso p. 60, *sandix* Cuyabá p. 61, **spp. n.**, DRAUDT Seitz Faun. exot. americ. **6** 1915.

Philosamia ; silk of hybrid, HAWKES J. exp. Zool. **21** p. 51.

Phoenicoprocta ignicauda **sp. n.** Matto Grosso p. 58, DRAUDT Seitz Faun. exot. americ. **6** 1915.

Poecilosoma annulatum **sp. n.** Bolivia p. 202, DRAUDT T.c.

Polyosia umbra **sp. n.** New Guinea p. 50, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Polypoetes mesitana **sp. n.** Colombia p. 3, DOGNIN Hétér. **13.**

Porina fuliginosa, postflavida, **spp. n.**, New Guinea p. 145, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.—*P. nigripuncta* p. 83 pl. ii f. 10, *nigricosta* p. 84 f. 11, *subochrea* f. 12, *argentipuncta* f. 13, p. 85, **spp. n.**, New Guinea, JOICEY & TALBOT Ann. Nat. hist. **20.**

Porthesia euproctiformis Darjeeling ? **sp. n.** p. 333, STRAND Seitz Fauna exot. Indo-austr. **10.**

Procris ; figures of North-african, OBERTHÜR Ét. Lép. comp. **13** figs. 3698–3720 pp. 43 & 44.—*P. orana algirica, bellieri prasina*, subspp. n. p. 345, ROTHSCHILD Nov. zool. **24.**

Proctocopis **gen. n.** near *Androcharta, forficula* **sp. n.** Colombia, DRAUDT p. 132 Seitz Fauna exot. americ. **6** 1915.

Psalis ? kanshireiensis **sp. n.** Formosa p. 146, WILEMAN & SOUTH Entomologist **50.**

Pseudojana pallidipennis grandis subsp. n., *perspicuifascia* **sp. n.** Java with subsp. *niassana*, ROTHSCHILD p. 487 Nov. zool. **24.**

Pseudomya absona **sp. n.** Peru p. 87, DRAUDT Seitz Faun. exot. americ. **6** 1915.

Pseudosphex cauca, pellax, **spp. n.**, Amer. mer. p. 38, DRAUDT T.c.—*P. fassli* **sp. n.** Bolivia p. 196, DRAUDT T.c.

Psilacron sericeus p. 239, *divisa* p. 240, **spp. n.**, Amer. mer., ROTHSCHILD Nov. zool. **24.**

Psilopleura albipes **sp. n.** Santos p. 89, DRAUDT Seitz Faun. exot. americ. **6** 1915.

Psyche aethiops p. 600 pl. xliii f. 5, *P. subhyalina* p. 601 pl. xliii fig. 6 **sp. n.**, JANSE Ann. Natal Mus. **3.**

Psychidae ; larval cases etc., BURROWS pp. 69–73 pl. iv Ent. Rec. **29**, and T.c. pp. 155–159.

Rajacoa fusciapicalis, rotundata, **spp. n.**, New Guinea p. 74, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.

Rhodogastria rufitarsus, curta, similima, erythropus, **spp. n.**, Rook island p. 185, ROTHSCHILD Nov. zool. **24.**

Rhuda opalistriga p. 249, *posttriangulum* p. 250, **spp. n.**, Amer. mer., ROTHSCHILD T.c.—*R. opalistriga* = *R. minor* Sch., DOGNIN p. 5 Hétér. **13.**

Rhyncopyga pimpla, xanthozona, Peru, *semiflava* Colombia, p. 90, *albigutta* Peru p. 91, *aurantiaca* Bolivia p. 203, **spp. n.**, DRAUDT Seitz Fauna exot. americ. **6** 1915.

Rifargia cossoides, terebroides, biplaga, p. 254, *basiplaga, steinbachi, muscosa*, p. 255, *intermedia* p. 256, **spp. n.**, Amer. mer., ROTHSCHILD Nov. zool. **24.**—*R. basiplaga* is *Anita galibensis* Sch., DOGNIN p. 5 Hétér. **13.**—*R. phasma* **sp. n.** Brazil p. 6, DOGNIN Hétér. **13.**

Robinsonia irregularis **sp. n.** Matto Grosso p. 475, ROTHSCHILD Nov. zool. **24.**

Roeselia mandschuriana larva pl. i f. 3 p. 230, WILEMAN Philipp. J. Sci. D. **12.**

Rosema klagesi **sp. n.** Amazons p. 261, ROTHSCHILD Nov. zool. **24** ; this is *apollinairei* D., DOGNIN p. 5 Hétér. **13.**

Salluca psitticula **sp. n.** Guiana p. 5, DOGNIN Hétér. **13.**

Samia cynthia f.n. *radiata* p. 130 pl. v f. 6, CLOSS Ent. Mitt. **6.**

Saturnia atlantpyri Niep. pl. ix f. 1, *numida* Aust. f. 2, ROTHSCHILD Nov. zool. **24.**

Saurita coccinea **sp. n.** Bolivia p. 203, DRAUDT Seitz Fauna exot. americ. **6.**

Scalmicauda bisecta **sp. n.** Sierra Leone p. 260, ROTHSCHILD Nov. zool. **24.**—*S. obliquifascia* pl. i fig., *ochreopicta, pratti*, pl. ii figs., **spp. n.**, Madagascar, KENRICK Tr. ent. Soc. Lond. **1917.**

Scaptesyle rothschildi **sp. n.** Padang-Rengas, DRAUDT p. 181 Seitz Faun. exot. Indo-austr. **10.**

Scepsis coprea **sp. n.** Brazil p. 217, DRAUDT Faun. exot. amer. **6.**

Schizura ipomeae, localities, TUCKER p. 280 Canad. Ent. **49.**

Scirarctia approximans, sordida, **spp. n.**, E. Africa p. 483, ROTHSCHILD Nov. zool. **24.**

Sewa orbiferata = (*Platypteryx cilicoides* Sn.), SWINHOE p. 333 Ann. Nat. hist. **19.**

Sitina cinyra p. 333, *epipasta* p. 334, **spp. n.**, Australia, SWINHOE T.c.

Somabrachys ragmata, variation and validity, CHRÉTIEN p. 168 Bull. Soc. ent. France **1917.**

Spatalia affinis New Guinea, *indistincta* Townsville, **spp. n.**, ROTHSCHILD p. 231 Nov. zool. **24.**

Sphecosoma plumbicincta Chiriqui p. 41, *albipalpe* Amazons p. 43, **spp. n.**, DRAUDT Seitz Faun. exot. americana **6** 1915.

Stauropus malgassica, lilacina, **spp. n.**, Madagascar p. 85 pl. figs., KENRICK Tr. ent. Soc. Lond. **1917.**—*S. nitidus, flavicollis*, p. 241, *purpurascens, viridinitens, leucophaeus, glaucoviridis*, p. 242, *triplagosus, frugilegus, viridogrisea*, p. 243, *alboviridis, germana, rufescens*, p. 244, *affinis*, New Guinea; *mediolinea* China, *incisus* Niger, *apiculatus* Penang, p. 245, *notodontina* Assam, *bipunctatus* Penang, p. 246, **spp. n.**, *sikkimensis khasianus* subsp. n. p. 245, ROTHSCHILD Nov. zool. **24.**—*S. obliterata* **sp. n.** Japan p. 29, WILEMAN & SOUTH Entomol. **50.**—*S. chloriolus* pl. i f. 15, *leucocraspedus* pl. ii f. 2, p. 59, *melanogramma* pl. i f. 16, *trisopylus* pl. ii f. 1, p. 60, **spp. n.**, New Guinea, JOICEY & TALBOT Ann. Nat. hist. **20.**

Stivia subdenudata **sp. n.** New Guinea p. 73, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Syntomis; revision, genitalia, new forms; *aequipuncta* p. 216, *ragazzii* p. 218, *rossica* p. 219, *turbida* p. 222, **spp. n.**, palaearctic, TURATI Atti. Soc. ital. **56.**

Tachida cossula **sp. n.** Bolivia p. 235, ROTHSCHILD Nov. zool. **24**; cf. DOGNIN p 4 Hétér. **13.**

Tagora pallida **sp. n.** Assam p. 486, ROTHSCHILD Nov. zool. **24.**

Takanea **gen. n.** *Lasiocampidae*, NAGANO Bull. Nawa Ent. Lab. **2** pp. 1–45, pls.

Talara togata, semiflava, **spp. n.**, Colombia, p. 250, DRAUDT Seitz Fauna americ. **6** 1915.

Tampea wollastoni **sp. n.** New Guinea p. 47, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Taragama purpureocastanea **sp. n.** New Guinea p. 105 f. 57, ROTHSCHILD T.c.—*T. repanda tenebrosa* subsp. n. p. 371, ROTHSCHILD Nov. zool. **24.**—*T. melanospilotus* p. 81 pl. ii f. 7, *castanea* p. 82 f. 9, **spp. n.**, New Guinea, JOICEY & TALBOT Ann. Nat. hist. **20.**

Tarsolepis rufobrunnea Travancore, *sericeus* Java, **spp. n.**, p. 252, ROTHSCHILD Nov. zool. **24.**—*T. japonica* **sp. n.** p. 29, WILEMAN & SOUTH Entomol. **50.**

Thyridopteryx pallidovenata **sp. n.** Florida p. 104, GROSSBECK Bull. Amer. Mus. **37.**

Trabala viridana **sp. n.** New Guinea p. 80 pl. iii f. 11, JOICEY & TALBOT Ann. Nat. hist. **20.**

Trichocossus arvensis p. 613 pl. xliii f. 11 **sp. n.**, JANSE Ann. Natal Mus. **3.**

Trichogyia minuta **sp. n.** New Guinea p. 106, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Trichomoplata dimorpha p. 240, *stigmatica* p. 241, **spp. n.**, Amazons, ROTHSCHILD Nov. zool. **24.**—*T. stigmatica* is *Tramanda fifiana* D., DOGNIN p. 5 Hétér. **13.**

Trischalis submarginata **sp. n.** p. 50 New Guinea, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Turnaca mediofascia Assam, *phragmatoecioides*, p. 257, *lanuginosa, nigripuncta*, p. 258, Africa, **spp. n.**, ROTHSCHILD Nov. zool. **24.**

Turuptiana pellucida, steinbachi, fuscescens, **spp. n.**, Amer. mer. p. 484, ROTHSCHILD T.c.

Utetheisa; forms, genitalia, FORBES p. 340 figs. Bull. Amer. Mus. **37.**

Viana magnifica **sp. n.** Lagos p. 492, ROTHSCHILD Nov. zool. **24.**

Xantharete **gen. n.** near *Phaenarete, stellans* **sp. n.** Colombia, DRAUDT p. 148 Seitz Fauna exot. americ. **6** 1915.

Zatrephes lentiginosus, albotestacea, rosella, **spp. n.**, Amer. mer. p. 476, ROTHSCHILD Nov. zool. 24.

Zygaena favonia littoralis p. 336, *marcouna excelsa* p. 340, *carniolica limitans* p. 341, *c. maroccana*, p. 342, subspp. n., ROTHSCHILD T.c.—*Z. lavandulae*, and ab. *consobrina, theryi* larvae, figs. pl. x, ROTHSCHILD T.c.—*Z. erythra* var. n. *albipes, rubicunda* var. n. *erythraeformis*, VERITY p. 289 Bull. Soc. ent. France **1916.**—*Z. filipendulae* and allies, distinctions, OBERTHÜR pp. 262–265 Bull. Soc. ent. France 1917. —*Z. filipendulae* varr. n. *calabra* and *siciliensis, lonicerae* var. n. *trinacria*, VERITY p. 222 Bull. Soc. ent. France **1917.**—*Z. occitanica*, parasitised larvae, RABAUD Bull. Sci. France Belg. **50** pp. 284–286.

Zygaenosia klossi **sp. n.** New Guinea p. 48 f. 55, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

NOCTUIDAE.

Noctuidae of Europe, CULOT 2 fascc. Geneva **1917.**

Abrostola tocionis **sp. n.** Japan, MARUMO Essays Nawa pp. 23–27.

Acosmetia malgassica **sp. n.** p. 89 pl. ii figs., KENRICK Tr. ent. Soc. Lond. **1917.**

Acronycta wanda **sp. n.** New Jersey, BUCHHOLZ p. 183 Ent. News **28.**

Agrotis leucogaster **sp. n.** p. 474, JANSE Ann. Durb. Mus. **1.**—*A. subrosea*, pupa, LJUNGDAHL Ent. Tidskr. **38** pl. ii fig. 4.

Aletia munda, accurata, **spp. n.**, New Zealand p. 239, PHILPOTT Tr. N.Z. Inst. **49.**

Anachrostis marginata **sp. n.** Formosa p. 26, *indistincta* **sp. n.** Formosa p. 53, WILEMAN & SOUTH Entomol. **50.**—*A. griseata, straminea, costiplaga* f. 70, **spp. n.**, New Guinea p. 72, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Anarta sierrae **sp. n.** California p. 6 pl. iii f. 3, BARNES & MCDUNNOUGH Contr. **3** 1916.

Anepa irrorata **sp. n.** Formosa p. 53, WILEMAN & SOUTH Entomol. **50.**

Antarchaea pryeri **sp. n.** Japan p. 27, WILEMAN & SOUTH T.c.

Anticarsia gemmatilis, life history, WATSON J. Econ. Ent. **9** 1916 pp. 521–528 pls. xxxix xl ff. 36 37.

Aplecta nebulosa var. n. *plumbosa*, MANSBRIDGE p. 49 Entomol. **50.**

Aramuna testacea **sp. n.** New Guinea p. 73, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Aratatha superba **sp. n.** p. 476, JANSE Ann. Durb. Mus. **1.**

Arzama brehmei **sp. n.** New Jersey p. 166 pl. xii figs. 1 & 2, BARNES & MCDUNNOUGH Contr. **3** 1916.

Athyrma spilota **sp. n.** New Guinea p. 51 pl. i f. 3, JOICEY & TALBOT Ann. Nat. hist. **20.**

Attatha flavata, coccinea, **spp. n.**, Philippines p. 337, SWINHOE Ann. Nat. hist. **19.**

Autographa olivacea **sp. n.** California p. 329, SKINNER Ent. News **28.**—*A. vaccinii*, synonymy, OTTOLENGUI p. 29 Ent. News **28.**

Axiocteta subuniformis **sp. n.** New Guinea p. 68, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Baniana callaxantha pl. iv fig., KENRICK p. 94 Tr. ent. Soc. Lond. **1917.**

Blenina hyblaeoides **sp. n.** Madagascar p. 92 pl. iii fig., KENRICK T.c.

Bocula moorei **sp. n.** Formosa p. 26, WILEMAN & SOUTH Entomol. **50.**

Bomolocha disualis Trobriand islds. p. 163, *tanis* Kulu p. 164, **spp. n.**, SWINHOE Ann. Nat. hist. **20.**—*B. fontis*, pupa, LJUNGDAHL Ent. Tidskr. **38** pl. ii fig. 2.

Borolia carneotincta p. 88 pl. i fig., *parvula, lithargyroides*, p. 89 pl. ii figs., **spp. n.**, Madagascar, KENRICK Tr. ent. Soc. Lond. **1917.**

Brabantia rhizoleuca, referred to *Noctuidae* = (*Dyasia melanoleuca* Rothsch.), DYAR p. 169 Insec. inscit. **5.**

Bryophila mitsuhashii **sp. n.** Japan, MARUMO Essays Nawa pp. 23–37.

Capnodes gillolensis **sp. n.** p. 162, SWINHOE Ann. Nat. hist. **20.**

Catabena pronuba **sp. n.** New Mexico pl. iii f. 11 p. 10, BARNES & MCDUNNOUGH Contr. **3** 1916.

Catada albeola f. 23, *dahlioides*, p. 62, *fuliginosa*, *postaurantia*, p. 63, **spp. n.**, New Guinea, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Catocala fraxini, life-history, MEVES Ent. Tidskr. **38** p. 229.—*C. elocata*, pupa, LJUNGDAHL Ent. Tidskr. **38** pl. i fig. 6.

Cautaeschra flavescens **sp. n.** New Guinea p. 53, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Cerapoda oblita = (*Autographa deserta* Gr.), MCDUNNOUGH p. 233 Ent. News **28.**

Chamaeclea basiochrea **sp. n.** Texas p. 12 pl. iii f. 22, BARNES & MCDUNNOUGH Contr. **3** 1916.

Chareas graminis, habits, PORRITT p. 176, IMMS p. 178 Ent. Mo. Mag. **53**; larval swarms, COLE & IMMS J. Board Agric. **24** pp. 514–522; SNELL T.c. pp. 523–526.

Chloridea flavescens p. 472, *jefferyi* p. 470, *fuscimacula* p. 467, **spp. n.**, JANSE Ann. Durb. Mus. **1.**

Chlorozada purpurea **sp. n.** Madagascar p. 92 pl. iv fig., KENRICK Tr. ent. Soc. Lond. **1917.**

Chusaris albipunctalis **sp. n.** New Guinea p. 64, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Cirphis philippensis **sp. n.** Luzon p. 336, SWINHOE Ann. Nat. Hist. **19.**

Claterna affinis **sp. n.** New Guinea p. 58, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Cobubatha olivacea **sp. n.** Florida p. 69, GROSSBECK Bull. Amer. Mus. **37.**

Conistria fungata **sp. n.** California p. 9 pl. i f. 1, BARNES & MCDUNNOUGH Contr. **3** 1916.

Copanarta sexpunctata **sp. n.** California p. 14 pl. iii f. 17, BARNES & MCDUNNOUGH T.c.

Cordylepalpa **n. n.** for *Clavipalpa* J. & T. 1915, JOICEY & TALBOT p. 51 Ann. Nat. hist. **20.**

Corgatha castaneorufa **sp. n.** New Guinea p. 54 f. 5, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.—*C. subindicata* p. 94, *thyridioides* p. 95, **spp. n.**, Madagascar pl. iii figs., KENRICK Tr. ent. Soc. Lond. **1917.**

Cosmophila erosa, life-history, DOZIER J. econ. Ent. **10** pp. 536–542 2 pls.

Crambodes lunata **sp. n.** Nevada p. 11 pl. i f. 6, BARNES & MCDUNNOUGH Contr. **3** 1916.

Craniophora ligustri, pupa, LJUNGDAHL Ent. Tidskr. **38** pl. ii fig. 5.

Dahlia flavicostalis **sp. n.** New Guinea p. 66, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Daseochaeta malgassica **sp. n.** p. 87 pl. iv fig., KENRICK Tr. ent. Soc. Lond. **1917.**

Diloba coeruleocephala, pupa, LJUNGDAHL Ent. Tidskr. **38** pl. i fig. 3.

Dunira fasciata **sp. n.** Japan p. 145, WILEMAN & SOUTH Entomol. **50.**

Dyspyralis noloides **sp. n.** Texas p. 19 pl. iii f. 5, BARNES & MCDUNNOUGH Contr. **3** 1916.

Earias albovenosana (? **sp. n.**), Algeria, OBERTHÜR p. 27 Et. Lep. Comp. **13.**

Echana chionaemoides **sp. n.** New Guinea p. 67, ROTHSCHILD Rep. B. O. U. exp **2** No. 15 1916.

Elaeodes proteoides **sp. n.** Madagascar p. 90 pl. i fig., KENRICK Tr. ent. Soc. Lond. **1917.**

Elusa affinis **sp. n.** New Guinea p. 51 f. 26, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Epizeuxis punctalis **sp. n.** Arizona p. 19 pl. iii f. 12, BARNES & MCDUNNOUGH Contr. **3** 1916.

Erebus odora, egg and larva, HISER p. 79 Ent. News **28.**

Eriopyga discreta **sp. n.** California p. 8 pl. i f. 18, BARNES & MCDUNNOUGH Contr. **3** 1916.

Erythroecia hebardi **sp. n.** Virginia p. 329, SKINNER Ent. News **28.**

Euaontia clarki **sp. n.** California p. 16 pl. iii f. 14, BARNES & MCDUNNOUGH Contr. **3** 1916.

Eublemma posttornalis **sp. n.** New Guinea p. 54 f. 8, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Eugrapta igniflua **sp. n.** Japan p. 145, WILEMAN & SOUTH Entomol. **50.**

Euplexia internimarginata **sp. n.** New Guinea p. 53 f. 6, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.—*E. lucipara*, american and british distinct, TAMS p. 157 pl. iii Ent. Mag. **53.**

Eustrotia eublemmides **sp. n.** New Guinea p. 54, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Eutelia aureopicta pl. iv fig., *ochreoplagiata* pl. ii fig., **spp. n.**, Madagascar, KENRICK Tr. ent. Soc. London **1917** p. 91.

Euxoa excellens, GIBSON p. 401 Canad. Ent. **49.**

Falcinala angulifascia, morapanoides, **spp. n.**, New Guinea p. 70, ROTHSCHILD Rep. B. O. U. exp. **2** No.15 1916.

Folka **nom. n.** for *Anepa* Sw., type *Hypena oxydata* H., *bhagha* **sp. n.** Assam, SWINHOE p. 163 Ann. Nat. hist. **20.**

Gonepteronia bipunctata **sp. n.** Madagascar p. 95 pl. iii fig., KENRICK Tr. ent. Soc. Lond. **1917.**

Grotella citronella **sp. n.** California pl. iii f. 13 p. 5, BARNES & MCDUNNOUGH Contr. **3** 1916.

Grypotes **gen. n.**, *dentifer* **sp. n.** New Mexico p. 66, with var. *borealis* p. 67, DYAR Insec. inscit. **5.**

Hirsutipedes intensior **sp. n.** New Guinea p. 65, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Hypena medioexcisa, ochraceolalis, griseolalis, fuliginosa, p. 69, *griseofasciata* p. 70, **spp. n.**, New Guinea, ROTHSCHILD T.c.—*H. montana* **sp. n.** New Guinea p. 54 pl. i f. 7, JOICEY & TALBOT Ann. Nat. hist. **20.**—*H. taiwana* **sp. n.** Formosa p. 146, WILEMAN & SOUTH Entomol. **50.**—*H. proboscidalis* pupa, LJUNGDAHL Ent. Tidskr. **38** pl. i fig. 5.

Hypenagonia obliquifascia **sp. n.** Formosa p. 28, *H. mediifascia* **sp. n.** Formosa p. 145, WILEMAN & SOUTH Entomol. **50.**

Hypenodes squalida **sp. n.** Japan p. 28, WILEMAN & SOUTH, T.c.

Hypoborathra unicolor **sp. n.** Japan, MARUMO Essays Nawa pp. 23–37.

Hypocala affinis **sp. n.** New Guinea p. 57, f. 31, ROTHCHILD Rep. B. O. U. exp. **2** No. 15, 1916.

Hypocalymnia gloriosa **sp. n.** Madagascar, p. 90 pl. iv. fig., KENRICK Tr. ent. Soc. Lond. **1917.**

Hypoperigea minuscula, variegata, **spp. n.**, Madagascar p. 87 pl. ii figs., KENRICK T.c.

Imleonga quadrilinea completa subsp. n. p. 61, ROTHCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Leucocnemis obscurella **sp. n.** Colorado p. 10 pl. iii f. 9, BARNES & MCDUNNOUGH Contr. **3** 1916.

Luceria sordida **sp. n.** Formosa p. 28, WILEMAN & SOUTH Entomol **50.**—*L. roseocinnamomea, bipartita, lactealis, affinis*, **spp. n.**, New Guinea p. 71, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Macrosemyra robusta **sp. n.** Madagascar p. 88 pl. ii fig., KENRICK Tr. ent. Soc. Lond. **1917.**

Magulaba rotundata **sp. n.** New Guinea p. 65, *wollastoni, inconspicua*, p. 147, **spp. n.**, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.

Mamestra tincta pupa, LJUNGDAHL Ent. Tidskr. **38** pl. i fig. 1

Mania maura f.n. *obscura*, AURIOL p. 155 Bull. Soc. Lép. Genève **3.**

Marapana indistincta, olivacea, **spp. n.**, New Guinea p. 66, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Mastigophorus albolineata griseomarginalis subsp. n. p. 64, ROTHSCHILD T.c.

Matopo scutulata **sp. n.** p. 474, JANSE Ann. Durb. Mus. **1.**

Mecodina polyscia **sp. n.** New Guinea p. 52 pl. i f. 5, JOICEY & TALBOT Ann. Nat. hist. **20.**

Melipotis brunneifasciata **sp. n.** California p. 17 pl. i f. 4, BARNES & McDUNNOUGH Contr. **3** 1916.

Mesogona vorbrodti **sp. n.** Switzerland p. 241, WEHRLI Verh. Ges. Basel **28**.

Metasada acontianalis **sp. n.** New Guinea p. 71, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Naarda albopunctalis, albostigma, **spp.n.**, New Guinea p. 67, ROTHSCHILD T.c.

Nigramma malgassica **sp. n.** p. 94 pl. iv fig., KENRICK Tr. ent. Soc. London **1917**.

Nocloa torniplaga **sp. n.** Arizona p. 13 pl. i f. 7, BARNES & McDUNNOUGH Contr. **3** 1916.

Nonagria typhae, pupa, LJUNGDAHL Ent. Tidskr. **38** pl. i fig. 7.

Oglasa hypenina **sp. n.** New Guinea p. 61, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.—*O. mediopallens* **sp. n.** Formosa p. 27, WILEMAN & SOUTH Entomol **50**.

Oncocnemis sagittata **sp. n.** Arizona p. 9, pl. i f. 8, BARNES & McDUNNOUGH Contr. **3** 1916.

Oxycilla basipallida **sp. n.** Arizona p. 17, pl. iii f. 2, BARNES & McDUNNOUGH T.c.

Oxyodes scrobiculata ochreata subsp. n. p. 61, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Oxythaphora **gen. n.** p. 50, *delta* **sp. n.** Brazil, p. 51, DYAR Insec. inscit. 4.

Ozarba viridaria **sp. n.** Madagascar p. 95 pl. iii fig., KENRICK Tr. ent. Soc. Lond. **1917**.

Pachnobia rubricosa, pupa, LJUNGDAHL Ent. Tidskr. **38** pl. ii fig. 10.

Pangrapta lignaria **sp. n.** New Guinea p. 64, ROTHSCHILD Rep. Brit. O. U. exp. **2** No. 15 1916.

Papaipema polymniae p. 121 pl. viii, figs. 1–5, *erygii* p. 125 figs. 6–9 **spp. n.**, U.S., BIRD Canad. Ent. **49**.

Paracaroides pratti **sp. n.** Madagascar p. 89 fig. pl. i, KENRICK Tr. ent. Soc. Lond. **1917**.

Paracolax griseata, albopunctata, **spp. n.**, New Guinea p. 68, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Paranympha assimilis p. 58, *klosii* p. 59, **spp. n.**, New Guinea, ROTHSCHILD T.c.

Perigea rubidata fig. pl. i, *griseata* fig. pl. ii, **spp. n.**, Madagascar p. 88, KENRICK Tr. ent. Soc. Lond. **1917**.

Phlegetonia pratti **sp. n.** Madagascar p. 92 pl. iii fig., KENRICK T.c.

Phobolosia bilineata **sp. n.** Texas p. 14 pl. iii f. 10, BARNES & McDUNNOUGH Contr. **3** 1916.

Phoenicophanta bicolor **sp. n.** Arizona p. 15 pl. iii f. 15, BARNES & McDUNNOUGH Contr. **3** 1916.

Phyllodes conspicillator pura subsp. n. p. 56, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Phytometra pratti **sp. n.** Madagascar p. 94 pl. iii, KENRICK Tr. ent. Soc. Lond. **1917**.—*P.* (*Prothymia*) *apicata* pl. iii f. 23, *P. curvata* f. 24, **spp. n.**, Arizona p. 18, BARNES & McDUNNOUGH Contr. **3** 1916.

Plateja plagosa **sp. n.** New Guinea p. 60, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Pleurona simillima **sp. n.** Andamans p. 161, SWINHOE Ann Nat. hist. **20**.

Plusia gamma, pupa, LJUNGDAHL Ent. Tidskr. **38** pl. ii fig. 3.—*P. moneta* cocoon colour, HAWKES p. 404 Tr. ent. Soc. London **1916**.

Polia (*Mamestra*) *brenda* pl. i. f. 3, *delecta* f. 17, **spp. n.**, U. S. p. 7, BARNES & McDUNNOUGH Contr. **3** 1916.

Polydesma rectefasciata, tessellata, **spp. n.**, Madagascar p. 93, pl. iv figs., KENRICK Tr. ent. Soc. Lond. **1917**.

Praxis caeruleotincta, nebulosa f. 11, **spp. n.**, New Guinea p. 59, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Pseudoglossa bipupillata **sp. n.** New Guinea p. 53 pl. i f. 6, JOICEY & TALBOT Ann. Nat. hist. **20**.

Raparna roseata **sp. n.** Japan p. 27, WILEMAN & SOUTH Entomol. **50**.

Rhynchagrotis orbipuncta **sp. n.** Arizona p. 6 pl. i f. 2, BARNES & McDUNNOUGH Contr. **3** 1916.

Risoba variegata **sp. n.** New Guinea p. 55 f. 30, ROTHSCHILD Rep. B. O. U exp. **2** No. 15 1916.

Schinia cupes var. n. *deserticola* p. 5 pl. iii f. 16, BARNES & McDUNNOUGH Contr. **3** 1916.

Scoliopteryx libatrix, pupa, LJUNGDAHL Ent. Tidskr, **38** pl. i. fig 2.

Sesamia melianoides sp n. New Guinea p. 53, ROTHSCHILD Rep. B. O. U. exp. 2 No. 15 1916.

Sideridis pseudoyu sp. n. New Guinea p. 52, ROTHSCHILD T.c.

Singara albomacula sp. n. Madagascar p. 96 pl. iii. fig., KENRICK Tr. ent. Soc. Lond. **1917**.

Stictoptera pectinata sp. n. Madagascar p. 91 pl. iv fig., KENRICK T.c.—*S. poliata* Singapore p. 337, *wetterensis* Amboina, *tongloana* Solomon islds., p. 338, *dispar*, *commutata*, New Guinea p. 339, spp. n.., SWINHOE Ann. Nat. hist. **19**.

Stilbia fotelloides sp. n. Arizona p. 11 pl. iii f. 1, BARNES & McDUNNOUGH Contr. **3** 1916.

Stiria olivalis sp. n. California p. 12 pl. iii f. 8, BARNES & McDUNNOUGH T.c.

Stiriodes virida sp. n. California p. 13 pl. iii f. 7, BARNES & McDUNNOUGH T.c.

Sypna diversa p. 25, *hampsoni* p. 26, spp. n., Formosa, WILEMAN & SOUTH Entomol **50**.

Systaticospora rufotincta sp. n. New Guinea p. 63, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Tarachidia albimargo Texas p. 15 pl. iii f. 25, *albitermen* Arizona p. 16 f. 6, spp. n., BARNES & McDUNNOUGH Contr. **3** 1916.

Timora albiticta sp. n. p. 473 JANSE Ann Durb. Mus. **1**.

Tipasa plumbea, *rufocastanea* f. 71, spp. n., New Guinea p. 73, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Tolpia brunnescens p. 72, *postrestricta*, p. 73, spp. n., New Guinea, ROTHSCHILD T.c.

Trachea triangulata p. 87, pl. ii fig., *leucopicta* p. 90 f. pl. ii, spp. n., Madagascar, KENRICK Tr. ent. Soc. Lond. **1917**.—*T. mediifascia* sp. n. Formosa p. 25, WILEMAN & SOUTH Entomol. **50**.

Xanthodesma rectangulata sp. n. Madagascar p. 96 pl. iii fig., KENRICK Tr. ent. Soc. Lond. **1917**.

Xylina furcifera, pupa, LJUNGDAHL Ent. Tidskr **38** pl. ii fig. 16.

Xylomoia chagnoni sp. n. Quebec p. 320, BARNES & McDUNNOUGH Canad. Ent. **49**.

Zethes wollastoni sp. n. New Guinea p. 60 f. 22, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.—*Z. limbalis* China p. 161, *sidonalis* Perak p. 162, spp. n., SWINHOE Ann. Nat. hist. **20**.—*Z. ochreomarginata* sp. n. New Guinea p. 53 pl. i f. 4, JOICEY & TALBOT Ann. Nat. hist. **20**.

GEOMETRIDAE (Incl. URANIIDAE, EPIPLEMIDAE, CYMATOPHORIDAE).

Points of interest, definition etc., PROUT Trans. London Nat. Hist. Soc. **1916** pp. 42–48.

SEITZ commences the vol. of Indo-australian Geometridae.

Tables of N. American Geometridae and of the genera of Hydriomeninae, FORBES pp. 44–67 J. N. York ent. Soc. **25**.

Notes on Walker's Canadian types in the D'Urban collection, BARNES & McDUNNOUGH pp. 35–42 Contr. **3** 1916 (we do not give these notes in detail below).

Hybrid Bistoninae; HARRISON J. Genetics **6** pp. 269–313 pl. x.

Abraxas mosaria sp. n. Formosa p. 164, SWINHOE Ann. Nat. hist. **20**.—*A. culpini* sp. n. Shanghai p. 312, PROUT Seitz Fauna pal. **4**.—*A. grossulariata*, pupal variation, PORRITT p. 235 Ent. Mo. Mag. **53**; var. n. *albovarleyata*, PORRITT p. 86 T.c.; hibernation, PICTET Bull. Soc. Lép. Genève **3** pp. 164–188.—*A. marginata*, pupa, LJUNGDAHL Ent. Tidskr. **38** pl. ii. fig 9.

Acidalia oberthueri sp. n. Tunis p. 53, LUCAS Bull. Soc. ent. France **1917**.—*A. griseolineata*, *lacteisabulosa*, spp. n., New Guinea p. 96, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.—*A. subrufaria* var. n. *fusaria* p. 393, CHRÉTIEN Ann. Soc. ent. France **85**.—*A. trigaria* ab. n. *rehfousiana*, CULOT p. 254 Bull. Soc. ent. France **1917**.

Acossus connectus **sp. n.** Texas p. 34 pl. i f. 5, BARNES & MCDUNNOUGH Contr. **3** 1916.

Adeixis parvitis **sp. n.** New Zealand p. 274, HOWES Tr. N.Z. Inst. **49.**

Aeolochroma prasina spadiocampa subsp. n. p. 111 pl. vii f. 1, PROUT Ann. Nat. hist. **20.**

Aethaloptera anticaria var. n. *fumata* p. 245 pl. xxiii f. 11, BARNES & MCDUNNOUGH Contr. **3** 1916.

Agathia curvifiniens **sp. n.** China p. 112 pl. vii f. 23, PROUT Ann. Nat. hist. **20.**

Alcidis liris sordidior subsp. n. p. 101, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Alcis cinnamomea **sp. n.** New Guinea p. 86, ROTHSCHILD T.c.

Alex niasica Nias **sp. n.** p. 416, SWINHOE Ann. Nat. hist. **19.**

Allochlorodes **gen. n.**, *elpis* **sp. n.**, PROUT p. 47 Ann. S. Afric. Mus. **17** 1917.

Amphidasis cognataria var. n. *fortitaria* pl. xxvi f. 2 and f. n. *swettaria*, BARNES & MCDUNNOUGH Contr. **3** 1916 p. 246.—*A. betularia*, pupa, LJUNGDAHL Ent. Tidskr. **38** pl. i fig. 4.

Anacosymbia chrysoparalias **sp. n.** W. Africa p. 432, PROUT Nov. zool. **24.**

Anapalta semiviridis **sp. n.** New Guinea p. 67 pl. iii f. 4, JOICEY & TALBOT Ann. Nat. hist. **20.**

Aninomyia=(*Graefia* Pears.), MCDUNNOUGH p. 233 Ent. News **28.**

Anisodes warreni **sp. n.** New Guinea p. 96, ROTHSCHILD Rep. B .O. U. exp. **2** No. 15 1916.

Anisozyga bicolor **sp. n.** New Guinea p. 97, ROTHSCHILD T.c.—*A. veniplaga* subsp. n. p. 67, pl. iv. f. 6, JOICEY & TALBOT Ann. Nat. hist. **20.**—*A. charma* **sp. n.** Sarawak p. 112 pl. vii f. 9, PROUT Ann. Nat. hist. **20.**

Anosioides ? pseudomelanoscia **sp. n.** New Guinea p. 88 f. 67, ROTHSCHILD T.c.

Anatharmostes simplicimargo **sp. n.** Congo p. 120 pl. vii f. 20, PROUT T.c.

Antitrygodes subaequalis **sp. n.** Isabel isld. p. 308, *parvimacula privativa* subsp. n. p. 307, PROUT Nov. zool. **24.**

Aphilopota phanerostigma **sp. n.** p. 66, PROUT Ann. S. Afric. Mus. **17.**

Apithecia **gen. n.** p. 266 type *Cidaria viridata* Moore, PROUT Seitz Fauna pal. **4.**

Arichanna barteli **sp. n.** Mongolia p. 304, *antiplasta* n. n. for *similaria* Leech p. 305, PROUT Seitz Fauna pal. **4.**—*A. olivescens* **sp. n.** Formosa p. 54, WILEMAN & SOUTH Entomol. **50.**—*A. nigrolineata* **sp. n.** Luzon p. 101, WILEMAN & SOUTH Entomologist **50.**

Aspilatopsis orthobates **sp. n.** p. 63, PROUT Ann. S. Afric. Mus. **17.**

Axiodes dochmoleuca **sp. n.** p. 65, PROUT T.c.

Bathycolpodes torniflorata **sp. n.** Cameroons p. 120, pl. vii. f. 29, PROUT Ann. Nat. hist. **20.**

Berta chrysolineata philippina subsp. n. p. 125 pl. vii. f. 14, PROUT T.c.—*B. poppaea* Hainan, *subrectistriga* Philippines, p. 302, *copiosa* Assam p. 303, **spp. n.**, PROUT Nov. zool. **24.**

Bistoninae; geography, HARRISON Naturalist 1917 pp. 161, etc.

Boarmia subochrearia **sp. n.** Formosa p. 53, WILEMAN & SOUTH Entomol. **50.**—*B. mavi* p. 369, *southi* p. 372, *ningpoaria* p. 373, *seitzi* p. 375, **spp. n.** China, PROUT Seitz Fauna pal. **4.**—*B. roboraria demonstrata* subsp. n. p. 315, PROUT Nov. zool. **24.**

Borbacha rubidaria **sp. n.** New Guinea p. 81 f. 69, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.

Bordeta klossi f. 78, *bursadoides*, **spp. n.**, New Guinea p. 91, ROTHSCHILD T.c.

Caberodes (*? Euchlaena*) *irroraria* **sp. n.** Chicago (= *majoraria* Pack.), BARNES & MCDUNNOUGH p. 189 Contr. **3**, 1916.

Calocalpe tristis **n. n.** for *sideritaria* Leech p. 201, PROUT Seitz Fauna pal. **4.**

Cartaletis libyssa natalensis subsp. n. p. 428, PROUT Nov. zool. **24.**

Cataclysme grandis **sp. n.** Teneriffe p. 266, PROUT Seitz Fauna pal. **4.**

Catopyrrha esperanza **sp. n.** Texas p. 239 pl. xxii. figs. 5 and 6, BARNES & MCDUNNOUGH Contr. 3 1916.

Celerena angustisignata **sp. n.** Sudest Isld. p. 293, PROUT Nov. zool. **24.**—*C. perithea waigeuensis* subsp. n. p. 229, JOICEY & TALBOT Ann. Nat. hist. **20.**

Chloroclystis (*Gnamptomia*) *muscosa tumefacta* subsp. n. p. 57. PROUT Ann. S. Afric. Mus. **17.**—*C. subcincta* **sp. n.** Nikko p. 298, PROUT Seitz Fauna pal. **4.** —*C. furva* p. 239, *humilis* p. 240, **spp. n.** New Zealand, PHILPOTT Tr. N. Z. Inst. **49.**—*C. clarkei* **sp. n.** New Zealand p. 274, HOWES Tr. N. Z. Inst. **49.**

Chloropteryx anisoctena **sp. n.** Venezuela p. 377, PROUT Nov. zool. **24.**

Chlorosea pulcherrima **sp. n.** California p. 20 pl. ii. f. 10, BARNES & MCDUNNOUGH Contr. **3,** 1916.

Chrysocraspeda pulverimargo p. 313, *claeophragma* p. 314, **spp. n.** New Guinea, PROUT Nov. zool. **24.**—*C. leighata holobapta* subsp. n. p. 433, PROUT Nov. zool. **24.**

Cidaria otregiata **sp. n.** England, METCALFE p. 74, note by MERA p. 75, Entomologist **50.**—*C. praefecta* Japan p. 219, *C.* (*Dystroma*) *planifasciata* Kashmir p. 220, *volutata* Centr. Asia p. 221, *exhausta* Tibet p. 259, *mediangularia* China p. 259, *contrita* Amurland p. 261, *subravaria* Turkestan p. 235, *egenata* Irkutsk, p. 239, *reclamata* Syria p. 240, *mediolineata* Japan p. 241, *coangulata* Mongolia p. 249, **spp. n.,** PROUT, Seitz Fauna pal. **4.**

Cleora semiochrea **sp. n.** Luzon p. 315, PROUT Nov. zool. **24.**—*C. proemia* **sp. n.** Madagascar p. 435, PROUT T.c.—*C. scripta* pl. iii. f. 7, *discipuncta* pl. iv f. 8, **spp. n.,** New Guinea, *flaccida constricta* subsp. n., JOICEY & TALBOT p. 74 Ann. Nat. hist. **20.**—*C. perpictaria* **sp. n.** Arizona p. 29 pl. ii f. 14, BARNES & MCDUNNOUGH Contr. **3,** 1916.—*C. sanctissima* p. 241 pl. xxv f. 6, *profanata* f. 3, *C.* (*Selidosema*) *anellula* p. 242 f. 4, *C. vernata* p. 243 f. 5, *rusticaria* f. 9, *C.* (*Selidosema*) *satisfacta* figs. 1 & 2, p. 244, *C. ocularia* p. 245 f. 10, **spp. n.,** U. S., BARNES & MCDUNNOUGH Contr. **3,** 1916.

Cochisea **gen. n.** near *Amphidasis*, *rigidaria* pl. ii. figs. 2 & 3, p. 29, *sinuaria* p. 30 f. 1, **spp. n.** Arizona, BARNES & MCDUNNOUGH Contr. **3,** 1916.

Coenotephria subg. of *Cidaria* p. 238, PROUT Seitz Fauna pal. **4.**

Comibaena hemictenes **sp. n.** Ivory coast p. 114 pl. vii f. 21, PROUT Ann. Nat. hist. **20.**

Comostola hypotyphla p. 303, *demeritaria*, India, *cedilla* New Guinea, p. 304, **spp. n.** PROUT. Nov. zool. **24.**

Conchylia actena, lamellata, **spp. n.,** p. 58, PROUT Ann. S. Afric. Mus. **17.**

Crasilogia dispar fubvitincta subsp. n. p. 68 pl. iv f. 11, JOICEY & TALBOT Ann. Nat. hist. **20.**

Craspedosia cyanodes, cyanophanes, **spp. n.,** New Guinea p. 229, JOICEY & TALBOT T.c.

Craspedosis wollastoni p. 88 f. 54, *swinhoei, affinis*, p. 89, *oviplaga, mirandina* p. 90, **spp. n.,** New Guinea, *munda aflava* subsp. n. p. 89, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.—*C. prouti* pl. iii f. 3, *scordylodes* pl. iv f. 18, p. 78, **spp. n.,** New Guinea, JOICEY & TALBOT Ann. Nat. hist. **20.**

Cryptoloba apicata **sp. n.** Chang-Yang p. 191, PROUT Seitz Fauna pal. **4.**

Cyllopoda gibbifrons, expansifascia, p. 391, *nigrivena* p. 392, **spp. n.,** Amer. mer., PROUT Nov. zool. **24.**

Cyphura urapteroides **sp. n.** New Guinea p. 80 pl. iii f. 16, JOICEY & TALBOT Ann. Nat. hist. **20.**

Dasycorsa **n. n.** for *Dasycephala* St., PROUT f. 332 Seitz Fauna pal. **4.**

Diactinia (*Euphyia*) *notata* **sp. n.** New Guinea p. 94 f. 48, ROTHSCHILD Rep. B. O. U. exp. **2** No. **15** 1916.

Diplodesma mystica Celebes p. 299, *planata* India with subsp. *dorsinigrata* p. 298, PROUT Nov. zool. **24.**

Dirades decorata brunnea subsp. n. p. 105, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Discalma arcifera dubia subsp. n. p. 72, PROUT Ann. S. Afric. Mus. **17.**

Discoglypha locupletata **sp. n.** Assam p. 307, *aureifloris parvifloris* subsp. n. p. 306, PROUT Nov. zool. **24.**

Discoloxia eucosma **sp. n.** Tibet p. 271, PROUT Seitz Fauna pal. **4.**

Drepanogynis leptodama, pero, **spp. n.,** p. 62, PROUT Ann. S. Afric. Mus. **17.**

Drepanulatrix (*Deilinia*) *lutearia* pl. ii figs. 5 & 6, *secundaria* figs. 11 & 12, **spp. n.**, California p. 25, *hulsti carneolata* var. n. p. 233 pl. xxviii figs. 5 & 6, BARNES & MCDUNNOUGH Contr. **3** 1916.

Dysphania endoleuca **sp. n.** New Guinea p. 293, *militaris abnegata* subsp. n., *latiplaga chrysostathes* subsp. n., p. 294, PROUT Nov. zool. **24.**—*D. porphyroides* **sp. n.** Andaman islds. p 111 pl. vii f. 12, PROUT Ann. Nat. hist. **20.**

Dyspteris viridilineata **sp. n.** Guiana p. 9, DOGNIN Hétér. **13.**

Dysstroma mulleolata abb. n. *sobria* p. 69, *subumbrata* and *ochrofuscaria* p. 70, SWETT Canad. Ent. **49.**

Ectropis nigrosparsa **sp. n.** Formosa p. 54, WILEMAN & SOUTH Entomol. **50.**—*E. farracearia inculta* subsp. n. p. 314, PROUT Nov. zool. **24.**

Ellopia (*Therina*) *phantoma* **sp. n.** Arizona p. 31 pl. i f. 12, BARNES & MCDUNNOUGH Contr. **3** 1916.—*E. jacularia* p. 254 pl. xxvii f. 1, *turbataria* p. 255 figs. 2 & 3, **spp. n.**, U. S., BARNES & MCDUNNOUGH T.c.

Ennomos alniaria, pupa, LJUNGDAHL Ent. Tidskr. **38** pl. ii fig. 8.

Eois davisi **sp. n.** Florida p. 90, GROSSBECK Bull. Amer. Mus. **37.**—*E. hyriaria*, PROUT p. 392 Nov. zool. **24.**

Epiplatymetra lentifluata **sp. n.** Arizona p. 266 pl. xxvii f. 13, BARNES & MCDUNNOUGH Contr. **3** 1916.

Epiplema wollastoni, *warreni*, *boarmiata* p. 104, *urapterygia*, p. 105, **spp. n.**, New Guinea, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.—*E. rhacina* **sp. n.** Khasia hills p. 339, SWINHOE Ann. Nat. hist. **19.**

Epirrhoe plebeculata var. n. *vivida* p. 232 pl. xx. figs. 1 & 2, BARNES & MCDUNNOUGH Contr. **3** 1916.

Episothalma sequestrata **sp. n.** New Guinea p. 297, PROUT Nov. zool. **24.**

Epitherapis ruptimacula **sp. n.** New Guinea p. 72 pl. iii f. 10, JOICEY & TALBOT Ann. Nat. hist. **20.**

Ergavia burrowsi p. 374, *piercei*, *endoeasta*, p. 375, *venturii* p. 376, **spp. n.** Amer. mer. PROUT Nov. zool. **24.**

Eucharidema arfaka **sp. n.** New Guinea p. 79 pl. iii f. 1, JOICEY & TALBOT Ann. Nat. Hist. **20.**

Euchlaena detractaria **sp. n.** Arizona p. 32 pl. i f. 11, BARNES & MCDUNNOUGH Contr. **3** 1916.—*E. albertanensis* **sp. n.** p. 351, SWETT Canad. Ent. **49.**

Eucymatoge spermaphaga **sp. n.** Oregon p. 68, DYAR Insec. inscit. **5.**

Eupithecia latipennata **sp. n.** Madeira p. 282, *corticosa* **n. n.** for *draudti* D. p. 296, PROUT Seitz Fauna pal. **4.**—*E. licita* p. 55, *rediviva* p. 54, *subcanipars* p. 55, *subconclusaria* p. 54, *subterlimbata* p. 56, **spp. n.**, PROUT Ann. S. Afric. Mus. **17.**—*E. subscriptaria* p. 433, *infelix* p. 434, **spp. n.** S. Africa, PROUT Nov. zool. **24.**—*E. taiwana*, *karapinensis*, **spp. n.** Formosa, WILEMAN & SOUTH Entomol. **50.**

Eurychoria albicosta **sp. n.** New Guinea p. 69 pl. iii f. 9, JOICEY & TALBOT Ann. Nat. hist. **20.**

Flavinia bogotensis **sp. n.** p. 7, DOGNIN Hétér. **13.**

Gelasma auspicata **sp. n.** Assam p. 295 PROUT Nov. zool. **24.**

Gabaria albimedia novoguinensis subsp. n. p. 71 pl. iii f. 5, JOICEY & TALBOT Ann. Nat. hist. **20.**

Garaeus virilis **sp. n.** China p. 327, PROUT Seitz Fauna pal **4.**

Gonodela wollastoni **sp. n.** New Guinea p. 82, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Gonodontis stictoneura **sp. n.** p. 72, PROUT Ann. S. Afric. Mus. **17.**—*G. aurata* **sp. n.** Japan p. 331, PROUT Seitz Fauna pal. **4.**—*G. macularia* **sp. n.** New Mexico p. 32 pl. i f. 16, BARNES & MCDUNNOUGH Contr. **3** 1916.

Hebdomophruda errans p. 61, *cremilinea* p. 60, **spp. n.**, PROUT Ann. S. Afric. Mus. **17.**

Heliomata fulliola **sp. n.** Arizona p. 233 pl. xx f. 9, BARNES & MCDUNNOUGH Contr. **3** 1916.

Hemerophila absurda **sp. n.** p. 67, PROUT Ann. S. Afric. Mus. **17.**—*H. jappygiaria* ab. n. *capsitanaria* p. 399, CHRÉTIEN Ann. Soc. ent. France **85.**

Hemistola malachitaria p. 299, *antigone* p. 300, **spp. n.** India, PROUT Nov. zool. **24.**

Hemithea notospila Borneo pl. vii. f. 27, *antigrapha* India f. 11, **spp. n.** p. 122, *distinctaria laeta* subsp. n. p. 123 f. 18, PROUT Ann. Nat. hist. **20.**—*H. subflavida copiosa, insularia duplicata*, p. 297 and *wuka isabella* p. 298, subspp. n., PROUT Nov. zool. **24.**

Heterolocha torniplaga **sp. n.** China p. 341, PROUT Seitz Fauna pal. **4.**

Horisme vitalbata var. n. *incana*, SWETT p. 190 Psyche **24.**

Hydriomena terminipunctata **sp. n.** Utah p. 22, pl. ii f. 7, BARNES & MCDUNNOUGH, Contr. **3,** 1916.—*H.* revision based on ♂ genitalia, pp. 6–38, pls. i–x, *tuolumne* p. 13 pl. ii figs. 13 and 14, *exculpata* p. 14 pl. iii figs. 1–3, *shasta* p. 15 f. 4, *marinata* p. 19 pl. vi f. 6, *arizonata* p. 20, pl. iii f. 10, *obliquilinea* p. 21 f. 11, *marmorata* p. 22 pl. iv. f. 3, *sierrae* p. 23 figs. 4 and 5, *muscata* p. 26 pl. iv f. 9, *furculoides* p. 33 pl. v f. 15, **spp. n.** U. S. BARNES & MCDUNNOUGH Contr. **4.**—*H. expolita* **sp. n.** New Zealand, PHILPOTT p. 240 Tr. N.Z. Inst. **49.**

Hygrochroa purpurascens **sp. n.** New Guinea p. 73 pl. iv. f. 3, JOICEY & TALBOT Ann. Nat. hist. **20.**

Hypenorhynchus inobtrusa p. 55, *costimacula* p. 56, **spp. n.** Formosa, WILEMAN & SOUTH Entomol. **50.**

Hypochrosis pseudoincensata f. 63, *olivaceata*, **spp. n.** New Guinea p. 85, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.—*H. mixticolor* **sp. n.** China p. 337, PROUT Seitz Fauna pal. **4.**—*H. martini* **sp. n.** Celebes p. 316, PROUT Nov. zool. **24.**

Hypodoxa pallida **sp. n.** New Guinea p. 66 pl. iv. f. 1, JOICEY & TALBOT Ann. Nat hist. **20.**—*H. emiliaria subleprosa* subsp. n. p. 293, PROUT Nov. zool. **24.**

Hyposidra rufo-ochracea, castaneorufa f. 44, p. 83, *plagosa* p. 48, **spp. n.**, New Guinea, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.

Hypoxystis **n. n.** for *Hypoplectis* auctt. p. 342, PROUT Seitz Fauna pal. **4.**

Iodis rhabdota p. 300, *xynia*, India, *colpostrophia* Java, p. 301, **spp. n.**, PROUT Nov. zool. **24.**

Itame perornata **sp. n.** Arizona p. 26 pl. ii f. 16, *extemporata* p. 236, pl. xxiii f. 10, *confederata* pl. xxiv figs. 5 & 6, *plumosata* figs. 7 & 8, p. 237, *epigenata* p. 238 pl. xxiii f. 5, **spp. n.** U. S., *coortaria* var. n. *enigmata* p. 236 pl. xxiv f. 2, *graphidaria* var. n. *sobriaria* p. 239, f. 9, BARNES & MCDUNNOUGH Contr. **3** 1916.

Larentia diplocampa **sp. n.** p. 53, PROUT Ann. S. Afr. Mus. **17.**—*L.* and *Xanthorhoe*, MEYRICK Tr. N. Z. Inst. **49** pp. 248-250.

Larentioides **gen. n.** *cacothemon* **sp. n.**, PROUT p. 68 Ann. S. Afric. Mus. **17.**

Lasioedma purpureorufa **sp. n.** New Guinea p. 93 f. 65, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15, 1916.

Leuculopsis parvistriata **sp. n.** Colombia p. 14, DOGNIN Hétér. **13.**

Lithostege deserticola California p. 20 pl. ii f. 15, *marcata* New Mexico p. 21 pl. iii f. 19, BARNES & MCDUNNOUGH Contr. **3** 1916.

Lobocraspeda coeruleonitens **sp. n.** New Guinea f. 59, *coeruleostriga latefascia* subsp. n., ROTHSCHILD p. 92 Rep. B.O.U. exp. **2** No. 15, 1916.

Lomographa chartularia = (*inaequata* Warr.), *infuscata* **sp. n.** Colombia, DOGNIN p. 11 Hétér. **13.**

Lycinna peccataria **sp. n.** Arizona p. 32 pl. i figs. 13 and 14, BARNES & MCDUNNOUGH Contr. **3,** 1916.

Lygris taiwana **sp. n.** Formosa p. 55, WILEMAN & SOUTH Entomol. **50.**—*L. xylina* var. n. *serrataria* p. 226 pl. xxi f. 9, BARNES & MC DUNNOUGH Contr. **3,** 1916.

Macaria laguata **sp. n.** W. Africa p. 126 pl. vii f. 3, PROUT Ann. Nat. hist. **20.**

Mannia **gen. n.** p. 382, type *oppositaria* Mann, PROUT Seitz Fauna pal. **4.**

Mauna electa **sp. n.** Africa p. 435, PROUT Nov. zool. **24.**

Medasina subpicaria **sp. n.** China p. 361, PROUT Seitz Fauna pal. **4.**

Megaloba postrubidaria **sp. n.** New Guinea p. 94 f. 66, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15, 1916.

Mesoleuca gratulata var. n. *latialbata* p. 232 pl. xxii f. 11, BARNES & MCDUNNOUGH Contr. **3,** 1916.

Metallochlora exorista **sp. n.** New Guinea, *militaris satisfacta* subsp. n., p. 296, PROUT Nov. zool. **24.**

Metanema excelsa var. n. *olivata* p. 260 pl. xxviii figs. 7 and 8, BARNES & McDUNNOUGH Contr. **3** 1916.

Metarranthis septentrionaria Manitoba p. 257, pl. xxix figs. 2 and 3, *angularia* Illinois p. 258 figs. 7 and 8, **spp. n.**, BARNES & McDUNNOUGH T.c.

Microligia intervenata **sp. n.** p. 59, PROUT Ann. S. Afric. Mus. **17.**

Microlygris **gen. n.** p. 207 type *Cidaria multistriata* Butl., PROUT Seitz Fauna pal. **4.**

Milioria anisochrysa **sp. n.** Schouten islds. p. 127 pl. vii f. 7, PROUT Ann. Nat. hist. **20.**

Mimandria cataractae **sp. n.** Rhodesia p. 110 pl. vii f. 25, PROUT T.c.

Monroa (*Cleora*) *interpunctata* **sp. n.** Arizona p. 240 pl. xxv f. 9, BARNES & McDUNNOUGH Contr. **3** 1916.

Morina curvata **sp. n.** California p. 27 pl. ii f. 17, BARNES & McDUNNOUGH T.c.

Myrioblephora fasciata, chogadoides, **spp. n.**, New Guinea p. 87, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Nadagara camura **sp. n.** New Guinea p. 70 pl. iv f. 14, JOICEY & TALBOT Ann. Nat. hist. **20.**

Nadagarodes sabulosus **sp. n.** New Guinea p. 70 pl. iv f. 12, JOICEY & TALBOT T.c.

Neotephria **subgen. n.** of *Cidaria*, PROUT p. 237 Seitz Fauna pal. **4.**

Neotherina noxiosa **sp. n.** Colombia p. 12, DOGNIN Hétér. **13.**

Nepytia regulata **sp. n.** Arizona p. 26 pl. ii f. 13, BARNES & McDUNNOUGH Contr. **3** 1916.

Neromia enotes **sp. n.** Gambia p. 123 pl. vii f. 15, PROUT Ann. Nat. hist. **20.**

Nesalcis croesaria = (*rufivenata* D.), DOGNIN p. 15 Hétér. **13.**

Neurotoca insolens **sp. n.** Rhodesia p. 124 pl. vii f. 19, PROUT Ann. Nat. hist. **20.**

Ninodes scintillans **sp. n.** China p. 317, PROUT Seitz Fauna pal. **4.**

Niphonissa luzonensis **sp. n.** Philippines p. 101, WILEMAN & SOUTH Entomologist **50.**

Nipteria panacea = (*munda* Warr.) p. 13, *cletagora* var. n. *subalba, hija* = (*subbrunnea* Warr.) p. 14, DOGNIN Hétér. **13.**

Nobilia turbata = (*Plutodes strigularia* Snell.), PROUT p. 307 Nov. zool. **24.**

Notoreas villosa **sp. n.** New Zealand p. 241, PHILPOTT Tr. N. Z. Inst. **49.**

Obolcola cacoctenes **sp. n.** p. 73, PROUT Ann. S. Afric. Mus. **17.**

Onychodes leptoctenopris ♀, p. 65 pl. iii f. 8, JOICEY & TALBOT Ann. Nat. hist. **20.**

Oospila circumsessa Amazons **sp. n.** p. 119 pl. vii f. 13, *circumdata striolata* subsp. n. p. 118 f. 24, PROUT Ann. Nat. hist. **20.**

Opisthograptis luteolata pupa, LJUNGDAHL Ent. Tidskr. **38** pl. ii fig. 14.

Ornithospila succincta **sp. n.** Penang p. 295, PROUT Nov. zool. **24.**

Ortholitha libanaria Lebanon p. 163 **sp. n.**, PROUT Seitz Fauna Pal. **4.** *O. peringueyi* p. 51, *punctiscripta* p. 52, **spp. n.**, PROUT Ann. S. Afric. Mus. **17.**

Orthometa foliacea f. 61, *argillacea* **spp. n.** New Guinea p. 84, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Oxychora assimilis **sp. n.** New Guinea p. 99, ROTHSCHILD T.c.

Palaeaspilates mansueta **sp. n.** p. 50, PROUT Ann. S. Afric. Mus. **17.**

Paralces aurantifascia latimacula pl. iv f. 10 subsp. n., *albistigma* pl. iii f. 2 p. 75, *indistincta* pl. iv f. 5, *costimacula* f. 17 p. 76, *lituata* pl. iii f. 6 p. 77, **spp. n.**, New Guinea, JOICEY & TALBOT Ann. Nat. hist. **20.**

Pareclipsis onus **sp. n.** p. 73, PROUT Ann. S. Afric. Mus. **17.**

Parexcelsa insonspicuaria **sp. n.** Arizona p 30 pl ii f. 18, BARNES & McDUNNOUGH Contr. **3** 1916.

Pentophlebia climena **sp. n.** São Paulo p. 12, DOGNIN Hétér. **13.**

Perenia maculata punctimaculata subsp. n. p. 317, PROUT Nov. zool. **24.**

Peridela birecta p. 70, *punctilinea* p. 69, **spp. n.**, PROUT Ann. S. Afric. Mus. **17.**

Perigramma immaculata = (*nigricosta* Warr.), DOGNIN p. 12 Hétér. **13.**

Perizoma tahoensis p. 23 pl. ii f. 8, *epictata* p. 24 pl. iii f. 20, **spp. n.**, California, BARNES & MCDUNNOUGH Contr. **3** 1916.

Petelia pseudognophos **sp. n.** p. 74, PROUT Ann. S. Afric. Mus. **17.**

Phaeoura perfidaria pl. xxvi figs. 4 & 5, *triaria* f. 3, p. 247, **spp. n.**, U. S., BARNES & MCDUNNOUGH Contr. **3** 1916.

Phasiane triviata p. 233 pl. xxiii f. 1, *ponderosa* p. 234 figs. 7 & 8, *septemberata* p. 235 f. 4, **spp. n.**, Amer. bor., *dislocaria* var. n. *malefactaria* p. 234 figs. 2 & 3, BARNES & MCDUNNOUGH T.c.

Phellinodes biapicata p. 108 pl. vii f. 5, *leucoplethes* p. 109 f. 28, **spp. n.**, Amer. mer., PROUT Ann. Nat. hist. **20.**

Phengommataea edwardsata berkleyata subsp n. p. 124, WRIGHT J. N. York. ent. Soc. **25.**

Pherne subpunctata vernalaria n.f., WRIGHT p. 123 T.c.

Philtraea elegantaria, in Louisiana, TUCKER p. 394 Ent. News **28.**

Phrudocentra senescens **sp. n.** Colombia p. 117 pl. vii f. 16, PROUT Ann. Nat. hist. **20.**

Pingasa talagi Solomons **sp. n.** p. 416, SWINHOE Ann. Nat. hist. **19.**—*P. lahayei austrina* subsp. n. p. 111 pl. vii f. 26, PROUT Ann. Nat. hist. **20.**

Plagodis intermediaria **sp. n.** Ottawa p. 248 pl. xxii f. 2, BARNES & MCDUNNOUGH Contr. **3** 1916.

Plataea triangularia **sp. n.** California p. 27 pl. iii f. 18, BARNES & MCDUNNOUGH T.c.—*P. californiaria pasadenaria* subsp. n. p. 123, WRIGHT J.N. York ent. Soc. **25.**

Plutodes connexa wandammensis subsp. n. p. 69 pl. iv f. 2, JOICEY & TALBOT Ann. Nat. hist. **20.**

Polyacme punctilinea **sp. n.** New Guinea p. 71 pl. iv f. 4, JOICEY & TALBOT Ann. Nat. hist. **20.**

Prasinocyma rhodocycla **sp. n.** Ivory coast p. 121 pl. vii f. 6, PROUT Ann. Nat. hist. **20.**—*P. angiana* **sp. n.** New Guinea p. 67 pl. iv f. 13, JOICEY & TALBOT T.c.—*P. fragilis solida* subsp. n. p. 296, PROUT Nov. zool. **24.**—*P. tranquilla* **sp.n.** Harar p. 428, PROUT T.c.

Problepsis plenorbis Sumatra p. 309, *crassinotata*, *longipannis*, p. 310, Assam, *paredra* Szechuan p. 312, **spp. n.**, *conjunctiva subjunctiva* p. 309, *apollinaria candidior* p. 312, subspp. n., *P. delphiaria* Gu. (as *Argyris*) = (*Problepsiodes argentisquama* Warr.) p. 311, PROUT T.c.—*P. similinotata* **sp. n.** Congo, *aegretta insculpta*, p. 431, *flavistigma dilatistigma* p. 432, subspp. n., PROUT Nov. zool. **24.**

Prohydata ignita **sp. n.** Costa Rica p. 124 pl. vii f. 10, PROUT Ann. Nat. hist. **20.**

Psaliodes (?) *olivacea*, *viriditincta*, **spp. n.**, New Guinea p. 95, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.

Pseudhemithea exomila **sp. n.** Cameroons p. 429, PROUT Nov. zool. **24.**

Pseudomaenas **n. nom.** for *Agrammodes* Warr., *oncodogramma* [**sp. n.**] PROUT, p. 60 Ann. S. Afric. Mus. **17.**

Pseudomiza opaca **sp. n.** New Guinea p. 71 pl. iv f. 7, JOICEY & TALBOT Ann. Nat. hist. **20.**

Pterotaea tremularia p. 27 pl. ii f 4. (? = *Cleora melanocarpa* Swett), *serrataria* p. 28 pl. ii f. 9, **spp. n.** California, BARNES & MCDUNNOUGH Contr. **3** 1916.

Ptochophyle apicirubra **sp. n.** Madagascar p. 433, PROUT Nov. zool. **24.**—*P. geranium* **sp. n.** New Guinea p. 313, PROUT T.c.

Ptychopoda lipara **sp. n.** 30, PROUT Ann. S. Afric. Mus. **17.**—*P. taiwana* p. 56, *sinuata*, *tainanensis*, *deleta*, p. 57, **spp. n.**, Formosa, WILEMAN & SOUTH Entomol. **50.**—*P. combinata* p. 389, *xanthodeta*, *callipepla*, p. 390, **spp. n.**, Amer. mer., PROUT Nov. zool. **42.**

Pyrrhorachis pyrrhogona subsp. n. *angustata* & *turgescens*, PROUT p. 305 T.c.

Racheospila abdominaria p. 218, *assaciaria* p. 219, **spp. n.**, Florida, BARNES & MCDUNNOUGH Contr. **3**

1916.—*R. glaucomarginaria* **sp. n.** California p. 224, BARNES & McDUNNOUGH T.c.—*R. rufoseriata* p. 376, *variifrons* p. 377, **spp. n.**, Amer. mer., PROUT Nov. zool. **24.**—*R. pentica* p. 115 pl. vii f. 2, *inaequalis* p. 116 f. 17, *lugentiscripta* p. 117 f. 8, with subsp. *dubia*, **spp. n.**, Amer. mer., PROUT Ann. Nat. hist. **20.**—*R. vermiculata*, ♀, DOGNIN p. 7 Hétér. **13.**

Rhodometra angasmarcata **sp. n.** Peru p. 9, *virgenpamba* var. n. *roseata* p. 8, DOGNIN Hétér **13.**

Rhodostrophia plesiochora **sp. n.** China, *bisinuata* W. = (*sinensis* Pr.), PROUT p. 306 Nov. zool. **24.**

Sabaria euchroes sp. n. India p. 316, PROUT T.c.

Sabulodes triangulata **sp. n.** Arizona p. 33, pl. i f. 15, BARNES & McDUNNOUGH Contr. **3** 1916.—*S. sericeata* **sp. n.** Arizona p. 261 pl. xxviii f. 4, BARNES & McDUNNOUGH Contr. **3** 1916.

Sarcinodes luzonensis **sp. n.** p. 102, WILEMAN & SOUTH Entomologist **50.**

Sauris muscosa **sp. n.** New Guinea p. 95, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.—*S. griseolauta arfakensis* **sp. n.** (sic) pl. iv f. 9, *definita* **sp. n.** f. 15, p. 68 New Guinea, JOICEY & TALBOT Ann. Nat. hist. **20.**

Scardamia klossi **sp. n.** New Guinea p. 81 f. 73, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.

Scopula flexio p. 48, *teniuscripta* p. 49, **spp. n.**, PROUT Ann. S. Afr. Mus. **17.**—*S. aetheomorpha* **sp. n.** New Guinea p. 312, PROUT Nov. zool. **24.**

Selenia kentaria f. n. *glaucata* p. 259 pl. xxii f. 4, BARNES & McDUNNOUGH Contr. **3** 1916.

Selidosema cypressaria **sp. n.** Florida p. 96, GROSSBECK Bull. Amer. Mus. **37.**

Semaeopus semicaeca p. 378, *euthyoria* p. 379, *dorsiornata*, *hypoderis*, p. 380, *catamompha* p. 381, *geminilinea*, *plumbeostrota*, *exypira*, p. 382, *vestita* p. 383, *tergilinea* p. 384, *purpureoplaga* p. 385, **sp. n.**, Amer. Mer.; *ladrilla flavicans* p. 379, *luridata subrugosa* p. 380, *rubida orbistigma* p. 383 *vestita asymphora* p. 384, subspp. n.; PROUT Nov. zool. **24.**

Sericosema viridirufaria f. n. *incarnata* p. 240, BARNES & McDUNNOUGH Contr. **3**, 1916.

Sicya olivata **sp. n.** New Mexico p. 31 pl. i. f. 10, BARNES & McDUNNOUGH T.c.—*S. pergilvaria* **sp. n.** California p. 253 pl. xxvii. figs. 11 & 12, BARNES & McDUNNOUGH T.c.

Sicyodes pulversa p. 64, *subochrea* p. 65, **spp. n.**, PROUT Ann. S. Afric. Mus. **17.**

Somatina probleptica p. 429, *virginalis* p. 430, **spp. n.**, Africa, PROUT Nov. zool. **24.**

Spaniocentra isosparia **sp. n.** Bombay p. 113 pl. vii f. 22, PROUT Ann. Nat. hist. **20.**

Spargania illustrata **sp. n.** Arizona pl. xx figs. 7 & 8 p. 230, *magnoliata* var. n. *ruptata* p. 231 pl. xix f. 1, BARNES & McDUNNOUGH Contr. **3**, 1916.

Stamnodes topazata var. n. *apicata* p 224 pl. xx f. 6, BARNES & McDUNNOUGH T.c.

Sterrha parallela **sp. n.** Formosa p. 55, WILEMAN & SOUTH Entomol. **50.**

Synaxis jubararia var. n. *sericeata* p. 260 pl. xxviii f. 9, BARNES & McDUNNOUGH Contr. **3**, 1916.

Tephrina abnormata **sp. n.** p. 71, PROUT Ann. S. Afric. Mus. **17.**

Tephroclystia rhoisata **sp. n.** Biskra p. 398, CHRÉTIEN Ann. Soc. ent. France **85.**—*T. sinuosaria* metamorphosis, MEVES Ent. Tidskr. **38** p. 147.

Thalassodes furvifimbria **sp. n.** Ceylon p. 296, PROUT Nov. zool. **24.**—*T. floccosa* **sp. n.** Malay penins. p. 121 pl. vii f. 4, PROUT Ann. Nat. hist. **20.**

Thalera lactearia, pupa, LJUNGDAHL Ent. Tidskr. **38** pl. ii fig 7.

Thera georgii var. n. *benesignata* p. 226 pl. xix f. 3, *latens* **sp. n.** Colorado p. 227 f. 5, BARNES & McDUNNOUGH Contr. **3**, 1916.

Tricentra allotmeta, *devigescens*, p. 387, *flavifigurata*, **spp. n.**, Amer. mer., *citrinaria grisescens* subsp. n., p. 388, PROUT Nov. zool. **24.**

Trichobaptria **gen. n.** for *exsecuta* Fald. p. 169, PROUT Seitz Fauna pal. **4.**

Trichodesia albovittata var. n. *tenuifasciata* p. 225 pl. xxii f. 7, BARNES & McDONNOUGH Contr. **3**, 1916.

Triphosa bipectinata **sp. n.** Arizona p. 225 pl. xix f. 6, BARNES & McDUNNOUGH T.c.

T. dubitata, pupa, LJUNGDAHL Ent. Tidskr. **38** pl. ii fig. 15.

Trygodes basisignata p. 385, *viridiplena* p. 386, **spp. n.**, Amer. mer., *niobe desolata* subsp. n. p. 387, PROUT Nov. zool. **24.**

Urapteroides swinhoei **sp. n.**, *atromentaria extensa* subsp. n., New Guinea p. 103, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.—*U. swinhoei* **sp. n.**, Waigeu p. 229, JOICEY & TALBOT Ann. Nat. hist. **20.**

Xandrames postmarginata **sp. n.** Luzon p. 101, WILEMAN & SOUTH Entomol. **50.**

Xanthomima melanura = (*plumbeomargo* J. & T.), JOICEY & TALBOT Ann. Nat. hist. **20** p. 78.

Xanthorhoe vulgaris, pallida, **spp. n.** New Guinea p. 93, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.—*X. alticolata* **sp. n.** Colorado p. 23 pl. i f. 9, BARNES & McDUNNOUGH Contr. **3** 1916.—*X. umbrosa, nebulosa*, **spp. n.**, New Zealand p. 241, PHILPOTT Tr. N. Z. Inst. **49.**—*X. subflava* **sp. n.** New Zealand p. 274, HOWES Tr. N. Z. Inst. **49.**

X (*ystrota?*) *ferrugata* var. n. *infumata* p. 230 pl. xix figs. 7 & 8, BARNES & McDUNNOUGH Contr. **3** 1916.

Zanclidia **gen. n.** p. 330 for *testacea* Butl., PROUT Seitz Fauna pal. **4.**

Zenophleps obscurata var. n. *infumata* p. 232 pl. xix. f. 11, BARNES & McDUNNOUGH Contr. **3**, 1916.

PYRALIDAE, THYRIDIDAE.

Revision of Gallerianae, HAMPSON pp. 17–58 Nov. zool. **24.**

Criticisms and synonymy of the check-list of North-american *Lep.*, *Pyraustinae*, DYAR Insec. inscit. 5 pp. 69–74.

Acara pratti **sp. n.** Madagascar p. 96 pl. v fig., KENRICK Tr. ent. Soc. Lond. **1917.**

Acracona flammealis, metachryseis, **spp. n.**, Africa p. 30, HAMPSON Nov. zool. **24.**

Acrobasis myricella **sp. n.** Florida p. 221 pl. xviii f. 1, BARNES & McDUNNOUGH Contr. **3**, 1916.—*A. nebulella*, GILL U. S. Dep. Agric. Ent. **571.**

Acronca **gen. n.** *Phycitinae* p. 404, *albiflavella, similella*, **spp. n.**, U. S., p. 405, BARNES & McDUNNOUGH Canad. Ent. **49.**

Agdistopsis **gen. n.** p. 43, *petrochroa* **sp. n.** Formosa p. 44, HAMPSON Nov. zool. **24.**

Agrotera rufitinctalis **sp. n.** Africa p. 376, HAMPSON Ann. Nat. hist. **20.**—*A. ornata* **sp. n.** Formosa p. 176, WILEMAN & SOUTH Entomol. **50.**—*A. ignepictoides* **sp. n.** New Guinea p. 128 f. 4[1], ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.

Almonia atratalis **sp. n.** New Guinea p. 125 f. 40, ROTHSCHILD T.c.

Alpheias transferens **sp. n.** California p. 82, DYAR Insec. inscit. **5.**

Ambia chrysogramma Samoa, *cymophoralis* Louisiad. is., p. 459, *rufitincta* p. 460, *hemigrammalis, sufetulodes*, p. 461, S. America, *fulvicolor* New Guinea, *albiflavalis* Nigeria, p. 462, *niveiplagalis* Peru p. 463, *melanistis* Formosa, *argentistriata*, p. 464, *phacomeralis* p. 465, Amer. mer., **spp. n.**, HAMPSON Ann. Nat. hist. **19.**—*A. interruptalis* **sp. n.** Formosa p. 175, WILEMAN & SOUTH Entomol. **50.**—*A. punctimarginata* p. 118, *obliquistriga, marginalis, klossi*, p. 119, **spp. n.**, New Guinea, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.

Ancylolomia elongata **sp. n.** Algeria p. 54, LUCAS Bull. Soc. ent. France **1917.**

Anegcephalesis **gen. n.** *Phycitinae, cathaeretes* **sp. n.** Bahamas & Cuba, p. 46, DYAR; larva in detail, HEINRICH pp. 48–50 pl. i; DYAR Insec. inscit. **5.**

Anerastidia pulverea **sp. n.** Argentina p. 28, HAMPSON Nov. zool. **24.**

Anobostra **gen. n.**, *discimacula* p. 97, *albilinealis, punctilinealis, radialis*, p. 98, **spp. n.**, Africa, HAMPSON Ann. Nat. hist. **19.**

Aphomia ochracea New Guinea p. 38, *albifresa* Celebes p. 39, *melanomochla* Australia p. 40, *distinctella* Natal, *cyclophora* New Guinea, p. 41, *caffralis* p. 42, **spp. n.**, HAMPSON Nov. zool. **24.**

Aphytoceros subflavalis **sp. n.** New Guinea p. 342, SWINHOE Ann. Nat. hist. **19.**

Argyractis leucostola Africa, *flavivittalis*, p. 363, *cuprescens*, *productalis*, p. 364, *argyrophora*, *brunneosuffusa*, p. 365, S. America, *mimicalis* p. 366, *nyasalis*, Africa, *melanograpta*, p. 367, *phaeopastalis* p. 368, S. America, **spp. n.**, HAMPSON Ann. Nat. hist. **19.**

Aulacodes conjunctalis **sp. n.** Formosa p. 176, WILEMAN & SOUTH Entomol. **50.**—*A. ovomaculalis*, *wollastoni* f. 58, *pulchralis*, *uniplagialis*, p. 121, *postbasalis* p. 122, **spp. n.** New Guinea, *cervinalis distincta*, *diopsalis major*, subspp. n. p. 120, *similis* p. 147, *rufocastanea* p. 148, **spp. n.**, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.—*A. hemimelaena* Manila, *quadriplagiata* p. 470, *costifascialis* p. 471, Goodenough isld., *nigriplagialis*, *dolichoplagia*, New Guinea p. 472, Ann. Nat. hist. **19**, *mesoscialis* vol. **20** p. 201, *hemithermalis*, *chrysoxantha* p. 202, New Guinea, *metazonalis* Bismarck Arch. p. 203, *aurantipennis* p. 204, *argenteopicta*, p. 204, *mediofascialis* New Guinea, *thermichrysia* Bismarck Arch, p. 205, *coniferalis* p. 206, *flavifascialis*, *argentimaculalis*, p. 207, *longiplagialis*, *obliquivitta*, p. 208, New Guinea, **spp. n.**, HAMPSON Ann. Nat. Hist

Avitta subsignans, synonymy, SWINHOE p. 340 Ann. Nat. hist. **19.**

Balaenifrons haematographa Bougainville p. 57, *aryrostrota* Ceylon, *phoenicozona* Queensland, *ochrochroa* Singapore, p. 58, **spp. n.**, HAMPSON Nov. zool. **24.**

Bocchoris rectilinealis, *tenuilinealis*, **spp. n.** Madagascar p. 99 pl. v. figs., KENRICK Tr. ent. Soc. Lond. **1917.**—*B. plenilinealis* **sp. n.** Guiana p. 88, DYAR Insec. inscit. **5.**

Bostra purpurealis p. 90, *coenochroa*, *pallidifrons*, *lignealis*, p. 91, *rusinalis*, *pallidicolor*, *dentilinealis*, p. 92, *pyrochroalis*, *phoenicocraspis*, Africa, *flavalis* Formosa, p. 93, *phoenicoxanthe*, *maculinea*, p. 94, *ignirubralis* Ceylon, p. 95, **spp. n.**, HAMPSON Ann. Nat. hist. **19.**—*B. leonalis* var. n. *fasciatalis* p. 439, CHRÉTIEN Ann. Soc. ent. France **85.**

Bradina fuliginosa, *grisealis*, p. 124, *affinis*, *postbicoloralis*, p. 125, **spp. n.** New Guinea, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.—*B. xanthalis* Louisiade islds., *albigenitalis* Bougainville, **spp. n.** p. 212, HAMPSON Ann. Nat. hist. **20.**

Calamochrous affinis **sp. n.** New Guinea p. 144, ROTHSCHILD Rep B. O. U. exp. **2** No. 15, 1916.

Calera ? albicostella **sp. n.** Florida p. 134, GROSSBECK Bull. Amer. Mus. **37.**

Cataclysta perirrorata Africa, *nigristriata* New Guinea, p. 374, *amboinalis* Amboina p. 375, *queenslandica* p. 376, *nyasalis* Africa p. 457, *atriterminalis* Celebes, *obliquifascia*, *chionostola*, p. 458, Amer. mer., **spp. n.**, HAMPSON Ann. Nat. hist. **19.**

Catapsephis acutiangulatalis **sp. n.** New Guinea p. 127, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.—*C. subterminalis* New Georgia p. 371, *flavizonalis* New Guinea, *leucomelaena* Solomon islds., p. 372, **spp. n.**, HAMPSON Ann. Nat. hist. **20.**

Cathayia purpureotincta **sp. n.** Borneo p. 46, HAMPSON Nov. zool. **24.**

Cenoloba cuprescens **sp. n.** Sumbawa p. 279, HAMPSON Ann. Nat. hist. **20.**

Chilo opinionellus p 84, *loftini* p. 85, **spp. n.** Arizona, DYAR Insec. inscit. **5.**

Christophia anabasella **sp. n.** N. Africa p. 425, CHRÉTIEN Ann. Soc. ent. France **85.**

Clupeosoma strigatalis **sp. n.** New Guinea p. 126, ROTHSCHILD Rep. B. O. U exp. 2 No. 15, 1916.—*C. violascens* Borneo p. 275, *noordimimalis* Gold Coast, *brunneifusalis* New Guinea, p. 276, *atristriata* Timor, *rufistriata* New Guinea, p. 277, *astrigalis* Queensland, *glaucinalis* Singapore, p. 278, **spp. n.**, HAMPSON Ann. Nat. hist. **20.**—*C. eumoros* **sp. n.** Arizona p. 79, DYAR Insec. inscit. **5.**

Coelorhyncidia flammealis Ecuador p. 212, *cuprescens* New Guinea p. 213, **spp. n.**, HAMPSON Ann. Nat. hist. **20.**

Cornifrons phasma **sp. n.** California with var. *chlorophasma*, *simalis* varr. **n.** *sideralis* and *praeia*, p. 74, DYAR Insec. inscit. **5.**

Cotachena histricalis orientalis, subsp. **n.** p. 117, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.

Crambus subterminellus, *flaviguttellus*, **spp. n.** Formosa p. 148, WILEMAN & SOUTH Entomol. **50.**—*C. scutatus* **sp. n.** New Zealand p. 242, PHILPOTT Tr. N. Z. Inst. **49.**—*C. pallidellus* var. n. *salahinellus* p. 412, CHRÉTIEN Ann. Soc. ent. France **85.**—*C. hortuellus*, SCAMMELL Bull. **554**, U. S. Dep. Agric. Ent., pls.

Crithote horridipes = (*Selenis crinipes* Sn.), SWINHOE p. 340 Ann. Nat. hist. **19.**

Cryptoblabes gnidiella, GOUGH p. 19 Bull. Soc. ent. Egypte **6**, 1914.

Culladia bipunctella **sp. n.** Formosa p. 148, WILEMAN & SOUTH Entomol. **50.**

Curena indistinctalis **sp. n.** New Guinea p. 118, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15. 1916.

Dattinia = (*Buliana* Náv.) *eumictalis* **sp. n.** Sudan p. 96, HAMPSON Ann. Nat hist. **19.**

Desmia discrepans dissimulalis subsp. n. p. 128, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.—*D. albitarsalis* **spp. n.** Venezuela p. 376, HAMPSON Ann. Nat. hist. **20.**

Deuterophysa grisealis p. 214, *furvitermen* p. 215, **spp. n.** Africa, HAMPSON T.c.

Diasemia wollastoni **sp. n.** New Guinea with subsp. *minor*, ROTHSCHILD p. 142 Rep. B. O. U. exp. **2** No. 15, 1916.—*D. disputalis* **sp. n.** Arizona p. 373, BARNES & MCDUNNOUGH Canad. Ent. **49.**

Diathrausta griseifusa Brasil, *leucographa* Goodenough isld., p. 213, *fulviceps* Africa p. 214, **spp. n.**, HAMPSON Ann. Nat. hist. **20.**

Diatraea pulverata **sp. n.** Formosa p. 147, WILEMAN & SOUTH Entomol. **50.**—*D. evanescens* **sp. n.** Louisiana p. 84, DYAR Insec. inscit. **5.**

Diviana verecuntella **sp. n.** Florida p. 132, GROSSBECK Bull. Amer. Mus. **37.**

Dolichorrhinia planatella p. 131 **sp. n.** Florida, GROSSBECK T.c.

Dracaenura plebejifascialis p. 122, *semialbalis* f. 39, *pseudopelochra*, *griseotinctalis*, p. 123, **spp. n.** New Guinea, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.—*D. metaleuca* **sp. n.** New Guinea p. 211, HAMPSON Ann. Nat. hist. **20.**

Elaealis metachalcistis **sp. n.** E. Africa p. 76, HAMPSON Ann. Nat. Hist. **19.**

Elophila satanalis p. 75, *truckeealis* p. 76, *cancellalis*, *irroratalis* p. 79, *plevie*, *imitabilis*, p. 78, **spp. n.** U. S., DYAR Insec. inscit. **5.**

Emmalocera palaearctella **sp. n.** Tivoli, TURATI p. 109 figs. Bull. Soc. ent. ital. **48.**

Emporia cassiae **sp. n.** Guiana p. 91, DYAR Insec. inscit. **5.**

Endotricha ruficosta **sp. n.** Formosa p. 175, WILEMAN & SOUTH Entomol. **50.**

Epimorius epipaschiella Colombia p. 45, *adustalis* W. Africa p. 46, **spp. n.**, HAMPSON Nov. zool. **24.**

Epischnia wollastoni **sp. n.** New Guinea p. 147, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.

Ereta gaudialis **sp. n.** New Guinea p. 129, ROTHSCHILD T.c.

Eristena grisealis **sp. n.** New Guinea p. 148, ROTHSCHILD T.c.—*E. tenebrifera*, *tetralitha*, **spp. n.** New Guinea p. 368, HAMPSON Ann. Nat. hist. **19.**

Eudorina quadripuncta, *obliqua*, *subvariegata*, p. 111, *persimilis* p. 112, **spp. n.** New Guinea, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15, 1916.

Eumoorea gen. n. near *Emmalocera*, *anchridis* **sp. n.** Guiana, DYAR p. 91, Insec. inscit. **5.**

Eurythmia thurberiae **sp. n.** Arizona p. 46, DYAR T.c.

Evergestis straminalis, Raupe, SCHUYT Tyds. Ent. **60** p. 15.

Filodes alboterminalis pl. v fig., *grisealis* pl. vi fig., **spp. n.**, Madagascar, KENRICK p. 98 Tr. ent. Soc. Lond. **1917.**

Galleristhenia gen. n., *mellonidiella* **sp. n.** Queensland, HAMPSON p. 53 Nov. zool. **24.**

Gargela niphostola Ferguson isld., *obliquivitta* Batchian, **spp. n.**, p. 362, HAMPSON Ann. Nat. hist. **19.**

Geropaschia **n.n.** for *Araeopaschia*. H. 1916 nec 1906, HAMPSON p. 361 T.c.

Glaphyria; arrangement of species, DYAR p. 69, Insec. inscit. **5.**

Glyphodes paramicalis **sp. n.**, Madagascar p. 100 pl. vi fig., KENRICK Tr. ent. Soc. Lond. **1917.**—*G. iridescens, assimilis*, p. 138, **spp. n.**, New Guinea, ROTHSCHILD Rep. B. O. U. exp. **2** No. 15 1916.

Haimbachia venosalis **sp. n.** Louisiana p. 87, DYAR Insec. inscit. **5**

Hellula undalis, metamorphosis (Japanese), TAKAHASHI Konch. Sek., Gifu **21** p. 50–53.

Herculia roseitincta Transvaal p. 81, *plumbeoprunalis* Colombia, *perpulverea, griseobrunnea*, p. 82, *pyrerythra, lacteocilia*, p. 83, *perrubralis, castaneorufa, flavirufalis*, p. 84, *ecrhodalis, ecbrunnealis*, p. 85, Africa, **spp. n.**, HAMPSON, Ann. Nat. hist. **19.**—*Hereculia psammioxantha* **sp. n.** Guiana p. 90, DYAR Insec. inscit. **5.**

Heterocnephes aegialis **sp. n.** Trobriand islds. p. 165, SWINHOE Ann. Nat. hist. **20.**

Hirayamaia **gen. n.**, MARUMO Essays Nawa p. 23–37.

Hydropionea **gen. n.** *Hydrocampinae* type *melliculalis* Zell., HAMPSON p. 275 Ann. Nat. Hist. **20.**

Hypsopyga laticilialis **sp. n.** New Guinea p. 117, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.

Immyria pasadamia **sp. n.** Amer. bor. p. 45, DYAR Insec. inscit. **5.**

Lamoria medianalis **sp. n.** Mashonaland p. 50, HAMPSON Nov. zool. **24.**

Lipocosma diabata **sp. n.** Florida p. 70, DYAR Insec. inscit. **5.**

Lophocera **gen. n.** *Pyralinae, flavipuncta* **sp. n.** Madagascar pl. vi fig., KENRICK p. 98 Tr. ent. Soc. Lond. **1917.**

Lorymodes **gen. n.** type *P. diagonalis* H., *stenopteralis* **sp. n.** Gambia, HAMPSON p. 96 Ann. Nat. hist. **19.**

Loxostege sticticalis, life-cycles, MARSH p. 543 J. econ. ent. **10.**

Loxotegopsis **gen. n.** *Schoenobiinae, polle* **sp. n.** Texas, DYAR p. 84 Insec. inscit. **5.**

Macalla fasciolata f. 52, *wollastoni* f. 45, **spp. n.**, New Guinea p. 114, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.—*M. malgassica* **sp. n.** p. 97 pl. vi fig., KENRICK Tr. ent. Soc. Lond. **1917.**

Macrotheca leucocope, vulnifera, **spp. n.** U.S. p. 83, DYAR Insec. inscit. **5.**

Marasmia carstensziana **sp. n.** New Guinea p. 129, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.—*M. euryterminalis* Formosa, *brunneofusalis* Africa, **spp. n.**, p 378, HAMPSON Ann Nat. hist. **20.**

Margaronia alboscapulalis **sp. n.** New Guinea p. 342, SWINHOE Ann. Nat. hist. **19.**

Margarosticha gaudialis Admiralty islds., *euprepialis* Queensland, p. 372, *argyriograpta* Bismarck Arch. p. 373, **spp. n.** HAMPSON Ann. Nat. Hist. **19.**

Massepha grisealis **sp. n.** Coomassie p. 373, HAMPSON Ann. Nat. hist. **20.**

Mecyna adversa **sp. n.** New Zealand p. 243, PHILPOTT Tr. N.Z. Inst. **49.**

Metaraphia calamistis **sp. n.** Colombia p. 31, HAMPSON Nov. zool. **24.**

Microchlora bilincella **sp. n.** Bougainville p. 25, HAMPSON T.c.

Microglossa philippinensis Negros p. 279, *cupritincta* New Guinea p. 280, **spp. n.**, HAMPSON Ann. Nat. hist. **20.**

Microphysetica **gen. n.** *Hydrocampinae, peperita* **sp. n.** Mexico, HAMPSON p. 215 T.c.

Mineola grossbecki **sp. n.** Florida p. 221 pl. xviii f. 3, BARNES & MCDUNNOUGH Contr. **3** 1916.

Murgisca mesozonalis **sp. n.** W. Australia p. 362, HAMPSON Ann. Nat. hist. **19.**

Myelobia smerintha, natural history, IHERING pp. 60–68 Physis **3.**

Myelois nivosella **var. n.** *palpalbidella* p. 437, CHRÉTIEN Ann. Soc. ent. France **85.**

Nacoleia aurantiimaculalis, distinctifascia, assimilis, fuscalis, p. 133, *distinctalis* f. 51, *wollastoni* f. 68, *sordidalis*, p. 134, **spp. n.**, New Guinea, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.—*N. veroniae* **sp. n.** Guiana p. 89, DYAR Insec. inscit. **5.**

Nephopteryx rhenella var. n. *baltica* p. 301, STRAND Ent. Mitt. **6.**—*N. crataegella* **sp. n.** Florida p. 222 pl. xviii f. 8, BARNES & McDUNNOUGH Contr. **3** 1916.

Neurophyseta fulvistrigalis, disciatralis, p. 369, *mesophaealis, fulvilinealis*, p. 370, *flavirufalis* p. 371, **spp. n.**, Amer. mer., HAMPSON Ann. Nat. hist. **20.**

Noctuelia minima **sp. n.** California p. 132, DYAR Insec. inscit. **5.**

Noorda affinis, magnificalis f. 75, p. 143, *pupureiplagialis* p. 148, **spp. n.**, New Guinea, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.

Nymphula terranea **sp. n.** New Guinea p. 147, ROTHSCHILD T.c.—*N. manilensis* Manila, *leucoplagalis* Mexico, p. 369, *plumbofusalis*, Sudan, *metastictalis* Goodenough isld., p. 370, *flavicostalis, graphicalis*, Peru p. 371, **spp. n.**, HAMPSON Ann. Nat. hist. **19.**

Oligostigma centrimacula Queensland p. 465, *peruviensis* p. 466, *rufiterminalis* Madagascar, *piperitalis* Nigeria, p. 467, *flavialbalis* Madagascar, *leucomma* Queensland, p. 468, *fulvicolor* Peru, *flavipictalis* Singapore, p. 469, **spp. n.**, HAMPSON T.c.

Orocrambus cultus **sp. n.** New Zealand p. 242, PHILPOTT Tr. N.Z. Inst. **49.**

Orthaga confusa p. 128, *centralis* p. 129, **spp. n.** Formosa, WILEMAN & SOUTH Entomol. **50.**—*O. klossi* **sp. n.** New Guinea p. 116, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.

Osericana albistella = (*Sinacia pupillalis* Sn.), *d.* varr. n. *trypheropa* and *syntypistis*, SWINHOE Ann. Nat. hist. **19.**

Pagyda retractilinea Africa, *atriplagiata* New Guinea, **spp. n.**, p. 377, HAMPSON Ann. Nat. hist. **20.**—*P. nebulosa* **sp. n.** Formosa p. 177, WILEMAN & SOUTH Entomol. **50.**

Paracolax curvilinea Japan p. 27, *unicolor* Formosa p. 28, **spp. n.**, WILEMAN & SOUTH T.c.

Paractenia pallidirubra Bombay, *viridicostalis* New Guinea, p. 88, *sanguitincta* Gold coast, *phanerostola* Ecuador, *castaneonigra*, p. 89, *sichimensis* Sikhim p. 90, **spp. n.**, HAMPSON Ann. Nat. hist. **19.**

Parthenodes taiwanalis **sp. n.** Formosa p. 176, WILEMAN & SOUTH Entomol. **50.**—*P. mechanicalis, mesoleucalis*, p. 209, *parallelalis, rufalis*, p. 210, Amer. mer., *albiceps* Transvaal p. 211, **spp. n.**, HAMPSON Ann. Nat. hist. **20.**

Patissa parthenialis, chrysozona, **spp. n.**, U.S. p. 82, DYAR Insec. inscit. **5.**

Perisyntrocha flavalis **sp. n.** Cameroons p. 211, HAMPSON Ann. Nat. Hist. **20.**

Phryganodes assimilis, griseopalizans, violitincta, p. 131, *murinus* p. 132, **spp. n.**, New Guinea, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.

Phryganomima **gen. n.** for *noctifer* Dogn., HAMPSON p. 95, Ann. Nat. Hist. **19.**

Phycitodes **gen. n.** p. 26, *albistriata* **sp. n.** E. Africa p. 27, HAMPSON Nov. zool. **24.**

Picrogama albifascialis **sp. n.** New-Guinea p. 47, HAMPSON T.c.

Piletocera scotochroa, albiventralis, purpureofusa, Solomon islds., *plumbicostalis*, p. 266, *ruficeps, violascens*, p. 267, New Guinea, *albimixtalis* Queensland, *stenipteralis* New Guinea, p. 268, *leucocephalis* Bismarck Arch., *maculifrons* Assam, *leucogastralis* New Guinea, p. 269, *bisignalis* Bali, *discisignalis* Assam, p. 270, *bistrigalis* New Guinea, *aurantialis* Batchian, p. 271, *flavidiscalis* Sikkim, *metochrealis* Ceylon, p. 272, *costifascialis* Selangore, *mesophaealis, holophaealis*, p. 273, New Guinea, *flavalis* Centr. Africa, *analytodes* Bismarck Arch., p. 274, **spp. n.**, HAMPSON Ann. Nat. hist. **20.**

Pilocrocis insignificalis **sp. n.** New Guinea p. 130, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.—*P. gnamptoceralis* Panama p. 381, *fulvicolor, fulviflavalis*, Amer. mer. p. 382, *pachyceralis* New Guinea, *poliochroa*, p. 383, *flavicorpus, cuprescens*, Peru, p. 384, **spp. n.**, HAMPSON Ann. Nat. hist. **20.**—*P. tripunctata*, JONES Bull. **609** U.S. Dep. Agric. Ent.

Pionea griseofuscalis **sp. n.** New Guinea p. 144, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.

Plagiosella cinnamomea **sp. n.** New Guinea p. 109, *bivittata fuliginosa* subsp. n. p. 110, ROTHSCHILD T.c.

Platytes dinephelalis p. 85, *acerata, panalope,* p. 86, **spp. n.,** U.S., DYAR Insec. inscit. **5.**

Plutopaschia **gen. n.** type *Stericta sinapis* Rothsch., HAMPSON p. 361 Ann. Nat. Hist. **19.**

Pococera chrysoderas **sp. n.** Guiana p. 90, DYAR Insec. inscit. **5.**

Polyphota nigroalba, fuliginosa, **spp. n.,** New Guinea p. 116, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.

Prosthenia xyloryctella **sp. n.** Queensland p. 48, HAMPSON Nov. zool. **24.**

Psara nigridior **sp. n.** New Guinea p. 142, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15, 1916.

Pycnarmon = (*Entebria* Led.), *dialithalis* Coomassie, *peruvialis,* p. 374, *diffusalis* Africa p. 375, **spp. n.,** HAMPSON Ann. Nat. hist. **20.**

Pyla fasciella p. 405, *viridisuffusella* p. 406, **spp. n.,** California, BARNES & MCDUNNOUGH Canad. Ent. **49.**

Pyralis nigricilialis p. 65, *trifolialis* p. 66, *atrisparsalis, costinotalis, rufibasalis,* p. 67, *roseitincta, tyrialis, phoenicialis,* p. 68, *exumbralis, flavirubralis, perpulverea,* p. 69, **spp. n.,** Africa, HAMPSON Ann. Nat. hist. **19.**—*Pyralis* ? *costimacula* **sp. n.** Formosa, WILEMAN & SOUTH p. 175 Entomol. **50.**

Pyrausta aureotinctalis pl. v fig., *elutalis, marginescriptalis,* pl. vi figs., **spp. n.** Madagascar, KENRICK p. 100 Tr. ent. Soc. Lond. **1917.**—*P. terminalis* **sp. n.** Formosa p. 178, WILEMAN & SOUTH Entomol. **50.**—*P. punctilinealis* p. 145, *aurantialis* p. 145, **spp. n.** New Guinea, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.—*P. interlinealis* **sp. n.** Guiana p. 89, DYAR Insec. inscit. **5.**

Rhodoneura epiplemoides f. 62, *insignifica,* **spp. n.,** New Guinea p. 111, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15 1916.

Rhodophaea bicolorella **sp. n.** Arizona p. 404, BARNES & MCDUNNOUGH Canada. Ent. **49.**

Sacada papuana, albioculalis, New Guinea, *erythropis,* p. 86, *nyasana, viridalis,* p. 87, Africa, **spp. n.,** HAMPSON Ann. Nat. hist. **19.**

Salebria heinrichalis **sp. n.** Virginia p. 45, DYAR Insec. inscit. **5.**

Schoenobiodes **gen. n.** for *Acara striata* Schultz, HAMPSON p. 57 Nov. zool. **24.**

Schoenobius amblyptepennis p. 80, *roscidellus, nitidellus,* p. 81, **spp. n.** Amer. bor., *melinellus* f.n. *uniformellus,* DYAR Insec. inscit. **5.**

Scoparia klinckowstroemi **sp. n.** p. 3 figs. 1–3, *ambigualis* var. *nigra* var. n. p. 2 Faroe Islands, HAMFUT Ark. Zool. **10** No. 25.—*S. metacrossa* Fakfak p. 280, *strigigramma* Peru, *atricuprea* Jamaica, *coeruleotincta* Canaries, p. 281, *phaeopalpia* Natal p. 282, **spp. n.,** HAMPSON Ann. Nat. hist. **20.**—*S. fimbriata* **sp. n.** New Zealand p. 243, PHILPOTT Tr. N.Z. Inst. **49.**

Simplicia schaldusalis, synonymy, SWINHOE p. 341 Ann. Nat. hist. **19.**

Sindris leucomelas **sp. n.** Madagascar p. 98 pl. vi fig., KENRICK Tr. ent. Soc. Lond. **1917.**

Spectrotróta catena **sp. n.** Formosa p. 127, WILEMAN & SOUTH Entomol. **50.**

Stemmatophora albiceps p. 76, *oleoalbalis, chloralis,* p. 77, *cupricolor, olivotincta, hemicyclalis,* p. 78, *perrubralis,* Africa, *minimalis,* Ceylon p. 79, *excurralis, postaurantia, erebalis,* p. 80, *fusilinealis* p. 81, Africa, **spp. n.,** HAMPSON Ann. Nat. hist. **19.**

Stenia tenebrosalis **sp. n.** New Guinea p. 126, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15, 1916.—*S. retractalis* p. 216, *fusalis* p. 265, *glaucinalis* p. 266, **spp. n.,** Amer. mer., HAMPSON Ann. Nat. hist. **20.**

Stericta klossi f. 46, *olivaceoalba, indistincta, sinapis* f. 64, **spp. n.,** New Guinea p. 115, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15, 1916.—*S. dubia, tripartita,* **spp. n.,** Formosa p. 128, WILEMAN & SOUTH Entomol. **50.**

Strepsinoma aulacodoidalis p. 123, *albimaculalis, albiplagialis, fuliginosa, grisealis,* p. 124, **spp. n.,** New Guinea, ROTHSCHILD Rep. B.O.U. Exp. **2** No. 15, 1916.

Striglina rufocastanea **sp. n.** New Guinea p. 110, ROTHSCHILD T.c.

Sufetula brunnealis **sp. n.** Manila p. 373, HAMPSON Ann. Nat. hist. **20.**

Sylepta malgassica, *acutipennalis*, **spp. n.**, Madagascar p. 99 pl. vi figs., KENRICK Tr. ent. Soc. Lond. **1917.**—*S. sericealis* **sp. n.** Formosa p. 177, WILEMAN & SOUTH Entomol. **50.**—*S. klossi* p. 135 f. 76, *crucifera* f. 77, *irregularis*, p. 136, **spp. n.**, New Guinea, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15, 1916.—*S. zarialis* **sp. n.** New Guinea p. 342, SWINHOE Ann. Nat. hist. **19.**

Syngamia lophoceralis, *melanolopha*, Amer. mer. p. 379, *pachyceralis* Panama, *fuscicostalis* New Guinea, p. 380, **spp. n.**, HAMPSON Ann. Nat. hist. **20.**

Tabidia fuscifusalis **sp. n.** Ceylon p. 376, HAMPSON T.c.

Taeniaphora **gen. n.** *Epipaschianae*, *submarginata* **sp. n.** Madagascar pl. v fig., KENRICK Tr. ent. Soc. Lond. **1917** p. 97.

Talanga tolumnialis major subsp. n. p. 126, ROTHSCHILD Rep. B.O.U. exp. **2** No. 15, 1916.

Tallula watsoni **sp. n.** Florida p. 220 pl. xviii f. 6, BARNES & MCDUNNOUGH Contr. **3** 1916.

Tegulifera irroralis, *purpurascens*, p. 70, *elaeomesa*, *obovalis*, p. 71, *semicircularis*, Africa, *tripartita* Assam, *ochrimesalis*, p. 72, *pallidalis*, *bostralis*, p. 73, *metasarcistis*, Africa, *flavicarnea* Borneo, *flaveola*, p. 74, *chromalis*, *ochrealis*, *conisalis*, p. 75, Africa, **spp. n.**, HAMPSON Ann. Nat. hist. **19.**

Tetridia caletoralis interrupta subsp. n. p. 141, ROTHSCHILD Rep. B.O.U. exp. **2** 1916.

Tirithaba ignivena Louisiade Arch., *maculifera* p. 33, *fuscistriata*, New Guinea, *purpurella* Louisiade Arch., p. 34, *nitidalis* New Guinea p. 35, **spp. n.**, *pseudocomplana* n.n. for *Harpagoneura complana* H.p. 33, HAMPSON Nov. zool. **24.**

Titanio murmuralis **sp. n.** Texas p. 72, DYAR Insec. inscit. **5.**

Trichoptychodes delicata, valid, SWINHOE p. 165 Ann. Nat. hist. **20.**

Triphassa trichotibialis n.n. for *bilinea* H., HAMPSON p. 86 Ann. Nat. hist. **19.**

Trithyris fulvirufalis **sp. n.** Peru p. 381, HAMPSON Ann. Nat. hist. **20.**

Tyndis mediopallens, *pallidirufa*, p. 99, *pyrrhoxantha* p. 100, **spp. n.**, Africa, HAMPSON Ann. Nat. hist. **19.**

Wunderia **gen. n.** near *Eurythmidia*, *neaeriatella* **sp. n.** Florida p. 133, GROSSBECK Bull. Amer. Mus. **37.**

Zagiridia rufalis **sp. n.** Woodlark isld. p. 275, HAMPSON Ann. Nat. hist. **20.**

Zitha fulviceps **sp. n.** E. Africa p. 95, HAMPSON Ann. Nat. hist. **19.**

PTEROPHORIDAE, ORNEODIDAE.

Agdistis statices var. n. *delicatulella* p. 462, CHRÉTIEN Ann. Soc. ent. France **85.**

Orneodes hexadactyla, food-habits, JOANNIS Bull. Soc. ent. France **1917** p. 229.

Platyptilia enargota **sp. n.** New Guinea p. 103, DURRANT Rep. B.O.U. exp. **2** No. 15, 1916.

Pterophorus inulae var. *aegyptiaca*, CHAKOUR Bull. Soc. ent. Egypte **9** p. 78–80.—*P. illutus* **sp. n.** p. 2, MEYRICK Ann. S. Afr. Mus. **17.**—*P. simplicius*, *perplexus*, **spp. n.**, Florida p. 136, GROSSBECK Bull. Amer. Mus. **37.**

Steganodactyla cretosa **sp. n.** New Guinea p. 136, DURRANT Rep. B.O.U. exp. **2** No. 15, 1916.

Trichoptilus viduus **sp. n.**, p. 1, MEYRICK Ann. S. Afr. Mus. **17.**

PROTOTHEORIDAE.

Prototheoridae n. fam. p. 17 (intermediate between *Hepialidae* and *Micropterygidae*), MEYRICK Ann. S. Afr. Mus. **17.**

Prototheora, **gen. n.** p. 18, *petrosema* **sp. n.** p. 19, MEYRICK Ann. S. Afr. Mus. **17.**

TORTRICIDAE.

Microlepidoptera of Denmark, LARSEN Ent. Meddel. **11** pp. 28–319.

Amallectis **gen. n.** near *Phalonia*, *devincta* **sp. n.** Lima, MEYRICK p. 1 Tr. ent. Soc. London **1917.**

Amorbia helioxantha **sp. n.** Maroni p. 12, MEYRICK T.c.

Argyroploce faceta, cataphracta, p. 25, *cymotoma* p. 26, *nomaea, cycladica*, p. 27, *platyzona, impolita*, p. 28, **spp. n.** Amer. mer., MEYRICK T.c.—*A. lacuana* var. n. *baltibia* p. 305, STRAND Ent. Mitt. **6.**

Bactra seria **sp. n.** Peru p. 24, MEYRICK Tr. ent. Soc. Lond. **1917.**

Cacoecia chelograpta, aerobatica, **spp. n.** Amer. mer., MEYRICK p. 7 T.c.

Capua arrecta p. 5, *illaqueata* p. 6, **spp. n.** Amer. mer., MEYRICK T.c.

Carpocapsa pomonella, generations in New Mexico, QUAINTANCE & GEYER Bull. U. S. Dep. Agric. Ent. **429** 90 pp.—*C. pomonella*, WILSON Agric. Exp. Sta. Oregon Rep. **1911–12** 1913 p. 108–111 pl. vi.

Cnephasia setosa p. 10, *praecipua, dextata*, p. 11, *incusa* p. 12, **spp. n.** Amer. mer., MEYRICK Tr. ent. Soc. Lond. **1917.**—*C. incanana*, SHELDON p. 99 Entomologist **50.**

Conchylis flavociliana, SHELDON p. 32 T.c.

Crocidosema roraria p. 16, *cosmoptila, impendens*, p. 17, *callida, ptiladelpha*, p. 18, **spp. n.** Amer. mer., MEYRICK Tr. ent. Soc. Lond. **1917.**

Epiblema immundana ab. n. *ignalinonis* p. 307, STRAND Ent. Mitt. **6.**

Epichorista tenebrosa **sp. n.** New Zealand p. 243, PHILPOTT Tr. N.Z. Inst. **49.**

Eucosma procellosa, evidens, p. 19, *operta* p. 20, *religiosa, atricapilla*, p. 21, *digna, ortygia*, p. 22, *prudens* p. 23, **spp. n.** Amer. mer., MEYRICK Tr. ent. Soc. Lond. **1917.**

Eudemis naevana, biology, HUIE Proc. R. Phys. Soc. Edinburgh p. 164–178 pl. xii.

Eulia atalodes Colombia p. 9, *melanecta* p. 10, **spp. n.** Amer. mer., MEYRICK Tr. ent. Soc. Lond. **1917.**

Grapholitha nougatana var. n. *sideritana* p. 466, CHRÉTIEN Ann. Soc. ent. France **85.**

Hemerophila chi p. 156, *toputis* p. 167, **spp. n.** New Guinea, DURRANT p. 156 Rep. B. O. U. exp. **2** No. 15, 1916.

Hemimene consortana var. n. *balticana* p. 308, STRAND Ent. Mitt. **6.**

Lasiothyris **gen. n.** near *Pharmacis, limatula* **sp. n.** Ecuador, MEYRICK p. 4 Tr. ent. Soc. Lond. **1917.**

Laspeyresia populana p. 151, *lucobasis, laricana*, p. 152, **spp. n.** Montana, BUSCK P. ent. Soc. Washington **18.**—*L. flexula*, pupa, LJUNGDAHL Ent. Tidskr. **38** pl. ii fig. 11.—*L. molesta*, HARUKAWA & YAGI Ber. Ohara Inst. **1** pp. 151–170, 2 pls.

Megalodoris lamprostola **sp. n.** New Guinea p. 153, DURRANT Rep. B. O. U. exp. **2** No. 15, 1916.

Olethreutes charidotis p. 154, *talaris* p. 155, **spp. n.** New Guinea, DURRANT T.c.—*O. piceae* **sp. n.** Colorado p. 151, BUSCK P. ent. Soc. Washington **18.**—*O. andromodana* **sp. n.** Florida p. 223, BARNES & MCDUNNOUGH Contr. **3**, 1916.—*O. variegana*, natural history, parasites, SARRA pp. 175–187 Boll. Lab. Portici **12.**

Olindia miraculosa **sp. n.** New Zealand p. 246, MEYRICK Tr. N.Z. Inst. **49.**

Pandemis ribeana ab. n. *balticola* p. 305, STRAND Ent. Mitt. **6.**

Peronea sphenobathra p. 13, *cuprata* p. 14, **spp. n.** Guiana, MEYRICK Tr. ent. Soc. Lond. **1917.**—*P. cristana*, SHELDON Entomologist **50** pp. 217–222 etc.; *P. cristana* ab. n. *subnigrana*, IMAGE p. 267 Ent. **50.**

Phalonia sublimis, galbanea, p. 2, *scarificata, enclitica*, p. 3, *mordax* p. 4, **spp. n.** Amer. mer., MEYRICK Tr. ent. Soc. London **1917.**—*P. spartinana*, life-history, AINSLIE p. 93 pl. vi. Canad. Ent. **49.**

Phtheochroa praeposita **sp. n.** Colombia p. 5, MEYRICK Tr. ent. Soc. Lond. **1917.**

Polychrosis arenacea p. 23, *oxymochla* p. 24, **spp. n.** Amer. mer., MEYRICK T.c.—*P. viteana*, ISELY Bull. **553.** U. S. Dep. Agric. Ent., pls.

Pseudatteria fornicata **sp. n.** Colombia p. 6, MEYRICK Tr. ent. Soc. Lond. **1917.**

Sparganothis illuminata, subacida, **spp. n.** Maroni p. 13, MEYRICK T.c.

Spilonota sinuosa **sp. n.** p. 2, MEYRICK Ann. S. Afr. Mus. **17.**—*S. imminens, viridans*, **spp. n.** Guiana p. 15, MEYRICK Tr. ent. Soc. Lond. **1917.**—*S. dolopaea*, ♂; MEYRICK p. 247 Tr. N.Z. Inst. **49.**

Tortrix homophyla, capnosticha, p. 8, *lignea, fissiculata*, p. 9, **spp. n.** Amer. Mer., MEYRICK Tr. ent. Soc. Lond. **1917.**

TINEIDAE.

Hypermetamorphosis of some larvae, DE GRYSE P. ent. Soc. Washington **18** pp. 164–168.

Pupal wings of *Nepticula* and other genera, BRAUN Ann. ent. Soc. Amer. **10** pp. 233–239, pl.

Micropteryx a separate order, Zeugloptera, CHAPMAN pp. 310–314 Tr. ent. Soc. London **1916**, 12 pls.

Acanthedra **gen. n.** *Epermeniadae, stolidota* **sp. n.** Colorado, MEYRICK p. 66 Exot. Micr. **2.**

Acrocercops praegemina **sp. n.** p. 12, MEYRICK Ann. S. Afr. Mus. **17.**

Aeolanthes sagulata **sp. n.** Bengal p. 53, MEYRICK Exot. Micr. **2.**

Aeronectris **gen. n.** near *Batrachedra, enacta* **sp. n.** India, MEYRICK p. 35 T.c.

Agriophara halarcta **sp. n.** Madagascar p. 59, MEYRICK Tc.

Amydria merged in *Myrmecozela*, MEYRICK p. 87 T.c.—*A. peloplaca* **sp. n.** p. 16, MEYRICK Ann. S. Afr. Mus. **17.**

Anatrachyntis hemipelta p. 44, *nephelopyrrha*, India, *mythologica* Ceylon p. 45, **spp. n.**, MEYRICK Exot. Micr. **2.**

Anomoxena **gen. n.** *Gelechiadae* p. 28, *spinigera* Colombia p. 29, *tetraxoa* Ecuador p. 30, **spp. n.**, MEYRICK Tr. ent. Soc. Lond. **1917.**

Antiopala ebenospila **sp. n.** Queensland, TURNER Trans. R. Soc. S. Aust. **41** p. 79.

Archyala atomarcha **sp. n.** N. Australia p. 86, MEYRICK Exot. Micr. **2.**

Ardiosteres dryophracta, pectinata, p. 90, *lacerata* p. 91, **spp. n.** Australia, MEYRICK T.c.

Areocosma **gen. n.** *Oecophoridae, orsobella* **sp. n.**, MEYRICK p. 7 Ann. S. Afr. Mus. **17.**

Argyresthia eugeniella, arceuthobiella, libocedrella, p. 153, *furcatella* p. 154, **spp. n.** U. S., BUSCK P. ent. Soc. Washington **18.**—*A. illuminatella*, SCHUTZE Deutsche. ent. Zs. Iris. **31** p. 4–23.

Aristotelia aulonota plumata, p. 30, *erycina* p. 31, *cytheracea, cynthia*, p. 32, *saturnina, perfossa*, p. 33, *paphia, aphiltra*, p. 34, *radicata, oribatis*, p. 35, *vicana, ephoria, cosmographa*, p. 36, **spp. n.** Amer. mer., MEYRICK Tr. ent. Soc. London **1917.**

Atteva chionosticta **sp. n.** New Guinea p. 159, DURRANT Rep. B. O. U. exp. **2** No. 15, 1916.

Barea eophila **sp. n.** New South Wales. TURNER Trans. R. Soc. S. Aust. **41** p. 57,

Batrachedra mathesoni **sp. n.** Florida p. 150, BUSCK P. ent. Soc. Washington **18.**—*B. filicicola* **sp. n.** New Zealand, MEYRICK p. 247 Tr. N.Z. Inst. **49.**

Borkhausenia tetraphaea, Synon. with *Oecophora anthemodes*, TURNER Trans. R. Soc. S. Aust. **41** p. 57.

Brachydoxa **gen. n.** *Tineidae, syntrocha* **sp. n.** Assam, MEYRICK p. 83 Exot. Micr. **2.**

Callicerastis photophanes p. 82, *leucotona* p. 83, **spp. n.** Queensland, MEYRICK T.c.

Callixestis **gen. n.** *Cosmopterygidae, chrysidota* Bengal, *lubricata* Ceylon, **spp. n.**, MEYRICK p. 41 T.c.

Capanica **gen. n.** near *Xestocasis, astrophanes, lamprolitha*, **spp. n.** Guiana, MEYRICK p. 63, T.c.

Cathalistis **gen. n.** *Tineidae, ornicephela* **sp. n.**, MEYRICK p. 14 Ann. S. Afr. Mus. **17.**

Cecidoses eremita Curt. p. 134, BRÈTHES An. Ci. Argent. **82**; *Cecidioses eremita* = (*Clistoses artifex* K. & J.), natural history, JÖRGENSEN p. 1, gall pl. i f. 12, Physis **3.**

Cecidosidae, fam. n. p. 118 and p. 132, BRÈTHES An. Ci. argent. **82.**

Celestica **gen. n.** *Tineidae*, type *angustipennis* H.—Schaeff, MEYRICK p. 79 Exot. Micr. **2.**

Ceromitia xanthocoma p. 617 **sp. n.**, MEYRICK Ann. Natal. Mus. **3.**—*Ceromitia* **sp. n.** p. 17 MEYRICK Ann. S. Afr. Mus. **17.**

Chezala absona Northern Territory, *aleurias, silvestris, torpida*, Queensland, **spp. n.**, TURNER Trans. R. Soc. S. Aust. **41** p. 80–82.

Cholotis pachnodes Bengal, *archaica* Ceylon, **spp. n.** p. 44, MEYRICK Exot. Micr. **2.**

Choropleca acrodisca p. 79, *isodisca, catorthota*, p. 80, *panscia, sublimis*, p. 81, *zygoterma, rhombifera*, p. 82, **spp. n.** Amer. mer., MEYRICK Exot. Micr. **2.**

Chrysoclista thrypsiphila **sp. n.** Ceylon p. 52, MEYRICK T.c.

Citharodica leparga **sp. n.** Queensland, TURNER Trans. R. Soc. S. Aust. **41** p. 108.

Coesyra euryzona, phaeocephala, delicia, epiplasta, lochmaea, diadela, silacea, gilvella, asema, sporeta, Queensland, *timalphes* Victoria, *stenotypa, haplogramma, achranta* New South Wales, *disticta* Northern Territorya nd Queensland, *zanclotypa* Queensland and Western Australia, *thiodes* Western Australia, *monoides* Queensland and New South Wales, **spp. n.**, TURNER p. 69–75 T.c.

Coleophora salviella **sp. n.** N. Africa p. 495. CHRÉTIEN Ann. Soc. ent. France **85.**—*C. thiopaea* Bombay, *crossophanes, crypsiphanes*, Ceylon, p. 70, *centrota, tarsocoma, aegra, argopleura*, India, *exarga* Colombia, p. 71, *statherota, ogmotona*, Ceylon, *interta* Peru, p. 72, *chordoscelis, niphomesta*, India, *aphypnota* Ceylon, p. 73, **spp. n.**, MEYRICK Exot. Micr. **2.**—*C. laricella*, metamorphosis (Japanese), KITAYAMA Konch. Sek. Gifu **21** p. 15–18.—*C. fuscedinella*, natural history, KELLER Vierteljahrschr. Ges. Zurich **62** p. 103 etc.

Compsotropha flavitincta **sp. n.** Queensland, TURNER Trans. R. Soc. S. Aust. **41** p. 93.

Copromorpha aeruginea **sp. n.** p. 9, MEYRICK Ann. S. Afr. Mus. **17.**

Cosmopteryx zathea **sp. n.** Coorg p. 36, MEYRICK Exot. Micr. **2.**—*C. phaeogastra* p. 257, *bambusae* p. 258, **spp. n.** India, MEYRICK Ent. Mo. Mag. **53.**

Crocanthes miltina p. 151, *celema* p. 152, *fallax* p. 164, *crypsichola* p. 165, **spp. n.** New Guinea, DURRANT Rep. B. O. U. exp. **2** No. 15 1916.

Crypsithyris epachyrota p. 73, *abstrusa, synolca*, India, *zymota* Ceylon, p. 74, *auriculata, melosema, effusa*, p. 75 India, *chrysippa* Ceylon p. 76, **spp. n.**, MEYRICK Exot. Micr. **2.**

Cryptolechia tetrastictà p. 6, *xanthosarca* p. 7, **spp. n.**, MEYRICK Ann. S. Afr. Mus. **17.**

Cryptophasa argophanta **sp. n.** Amboina p. 55, MEYRICK Exot. Micr. **2.**

Ctenocompa liopercna Bengal, *ophryota* Senegal, **spp. n.** p. 93, MEYRICK T.c.

Cyclopasis, characters, *habrarcha*, Ecuador, *gnathodes*, **spp. n.**, MEYRICK p. 64 T.c.

Deuterotinea paradoxella abb. n., *nervatella* and *decoratella* p. 261 figs., nervu es p. 262, JOANNIS Bull. Soc. ent. France **1917.**

Diascepsis **gen. n.** near *Crocanthes* p. 150, *fascinata* **sp. n.** New Guinea p. 151, DURRANT Rep. B. O. U. exp. **2** No. 15 1916.

Dichomeris aulotoma **sp. n.** p. 5, MEYRICK Ann. S. Afr. Mus. **17.**

Diocosma molybdella **sp. n.** p. 8, MEYRICK T.c.

Doleromima rhaphidias **sp. n.** Queensland, TURNER Trans. R. Soc. S. Aust. **41** p. 119.

Doxomeres **gen. n.** *Occophoridae, diaxantha* **sp. n.** MEYRICK p. 6 Ann. S. Afr. Mus. **17.**

Duvita **gen. n.** near *Aproaerema, vittella* **sp. n.** U. S., BUSCK p. 147 P. ent. Soc. Washington **18.**

Elasmopalpus lignosellus, LUGINBILL & AINSLIE Bull. **539** U. S. Dep. Agric. Ent. 3 pls.

Enteremna **gen. n.** *Xyloryctidae* type *dolerastis* Meyr., MEYRICK p. 55 Exot. Micr. **2.**

Eomystis ebenosticha Western Australia, *melanopiecta* Queensland, **spp. n.**, TURNER Trans. R. Soc. S. Aust. **41** p. 110–111.

Epaleura **gen. n.** *Tineidae, salaria*, **sp. n.**, MEYRICK p. 14 Ann. S. Afr. Mus. **17.**—*E. psapharota* **sp. n.** India p. 79, MEYRICK Exot. Micr. **2.**

Epermenia macescens p. 66, *dracontias, ellochistis, leucomantis*, p. 67 India, *ergastica* New Guinea, *xeranta* Queensland, *ozodes*, p. 68, *anacantha* p. 69, Ceylon, **spp. n.**, MEYRICK T.c.

Epidictica dicroa **sp. n.** New Guinea p. 160, DURRANT Rep. B. O. U. exp. 2 No. 5 1916

Epimactis sandycopa **sp. n.** p. 9, MEYRICK Ann. S Afr. Mus. **17.**

Epimarptis septicodas **sp. n.** Ceylon p. 69, MEYRICK Exot. Micr. **2.**

Epipyrga hemiphaës **sp. n.** Queensland, TURNER Trans. R. Soc. S. Aust. **41** p. 58.

Eretmocera typhonica **sp. n.** Ivory coast p. 64, MEYRICK Exot. Mirc. **2.**—*E. fuscipennis*, variations and synonyms, MEYRICK p. 62 Ent. Mag. **53.**

Eucecidoses **gen. n.**, *minutanus* **sp. n.** Argentina, p. 138, BRÈTHES An. Ci argent. **82.**

Eucrotala **gen. n.** near *Hapsifera* p. 95, *nucleata* **sp. n.** Assam p. 96, MEYRICK Exot. Micr. **2.**

Eulechria diaphanes synon. with *Trachyntis diaphanes*, *delochorda* **sp. n.** Queensland, TURNER Trans. R. Soc. S. Aust. **41** p. 58.

Eupetochira **gen. n.** *Xyloryctidae* type *xystopala* Meyr., MEYRICK p. 55 Exot. Micr. **2.**

Euphiltra fusiplaga, epileda, celeteria, **spp. n.**, Queensland TURNER Trans. R. Soc. S. Aust. **41** pp. 106–107.

Euprionocera eremnopa **sp. n.** Northern Territory TURNER p. 102 T.c.

Falculina antitypa **sp. n.** Guiana p. 58, MEYRICK Exot. Micr. **2.**

Fumea (and other Psychidae) vide Bombyces.

Gelechia sarcographa, triscelis, **spp. n.**, p. 3. MEYRICK Ann. S. Afr. Mus. **17.**—*G. puertella* p. 148, *paralogella, diversella, notandella* p. 149, **spp. n.**, California, BUSCK P. ent. Soc. Washington **18.**—*G. lacticoma* p. 48, *litigiosa, dryobathra,* p. 49, *eburata, consona, argosema* p. 50, *pentadora* p. 51, **spp. n.** Amer. mer., MEYRICK Tr. ent. Soc. Lond. **1917.**

Glyphipteryx idiomorpha **sp. n.** p. 10, MEYRICK Ann. S. Afr. Mus. **17.**—*G. aenea* **sp. n.** New Zealand, p. 244, PHILPOTT Tr. N. Z. Inst. **49.**

Gnamptonoma **gen. n.** *Heliodinidae leptura* **sp. n.** Ecuador, MEYRICK p. 65 Exot. Micr. **2.**

Gnorimoschema chenopodiella **sp. n.** Massachusetts p. 148, BUSCK P. ent. Soc. Washington **18.**

Gonaepa actinis **sp. n.** New Guinea p. 149, WALSINGHAM Rep. B. O. U. exp. **2** No. 15 1916.

Hapalosaris **gen. n.** near *Compsosaris, petulans* **sp. n.** Colombia, MEYRICK p. 37 Tr. ent. Soc. London **1917.**

Hapsifera latriodes, fetialis, **spp. n.** W. Africa, p. 88, MEYRICK Exot. Micr. **2.**

Heliocausta arrhodea Victoria, *idiosema, sarcodes* Queensland, *xanthisma* N. S. W., **spp. n.** TURNER Trans. R. Soc. S. Aust. **41** pp. 113–114.

Heliodines isoleura Ecuador, *demarcha* Peru, **spp. n.** p. 65, MEYRICK Exot. Micr. **2.**

Hieroxestis indiscreta **sp. n.** p. 13, MEYRICK Ann. S. Afr. Mus. **17.**

Holacarta **gen. n.** near *Trithamnora* type *satyrodes* M., MEYRICK p. 87, Exot. Micr. **2.**

Holcocera baccharisella **sp. n.** Argentina p. 449 figs., BRÈTHES Physis **3.**

Homilostola **gen. n.** near *Lepidoscia taeniata, autoplecta,* p. 92, *ascalopa, aequanima,* p. 93, **spp. n.** Amer. mer., MEYRICK Exot. Micr. **2.**

Hybocrossa **gen. n.** near *Lepidotarsa, paratypa* **sp. n.** New South Wales, TURNER Trans. R. Soc. S. Aust. **41** p. 105.

Hypersymmoca **gen. n.** near *Symmoca, faecivorella* **sp. n.** Gafsa, CHRÉTIEN p. 485 Ann. Soc. ent. France **85.**

Hypophrictis sollicita, lepras, India, *polyscia* Ceylon, **spp. n.** MEYRICK p. 85 Exot. Micr. **2.**

Imma discophora p. 157, *ramosa, timetica,* p. 158, **spp. n.**, New Guinea, DURRANT Rep. B. O. U. exp. **2** No. 15 1916.

Iphierga lysiphracta p. 89, *dispersa* p. 90, **spp. n.**, N. Australia, MEYRICK Exot. Micr. **2.**

Isophrictis **gen. n.** for part of *Paltodora,* MEYRICK p. 113 Ent. Mag. **53.**

Isorrhoa sidista **sp. n.** India p. 61, MEYRICK Exot. Micr. **2.**

Lactura anthina **sp. n.** New Guinea p. 160, DURRANT Rep. B. O. U. exp. 2 No. 15 1916.

Lecithocera deloma, strigosa, **spp. n.** New Guinea, p. 165, DURRANT T.c.

Lepidotarsa pentascia **sp. n.** Queensland, TURNER Trans. R. Soc. S. Aust. **41** p. 106.

Limnoecia heterosticta p. 42, *asteroleuca, psalidota* India, *dasytricha* Guiana, p. 43, **spp. n.**, MEYRICK Exot. Micr. **2.**

Lindera baliopa **sp. n.** Brazil p. 84, MEYRICK T.c.

Linoclostis brachyloga **sp. n.** Java p. 54, MEYRICK T.c.

Lita disjectella var. n. *tridentella* p. 471, CHRÉTIEN Ann. Soc. ent. France **85.**

Machaeritis calliphylla, hylobita, chalicrata, polycapna, Queensland, *dulcicula* New South Wales, **spp. n.** TURNER, Trans. R. Soc. S. Aust. **41** pp. 59–61.

Machetis plagiozona, laticincta, eudmeta, **spp. n.** Queensland, TURNER, p. 114–116 T.c.

Machima coccinea **sp. n.** Queensland, TURNER p. 59 T.c.

Mallobathra oriana, sphyrota, **spp. n.** India p. 91, MEYRICK Exot. Micr. **2.**—*M. illustris* **sp. n.** New Zealand p. 245, PHILPOTT Tr. N. Z. Inst. **49.**

Marmara elotella, life-history, figs., BUSCK pp. 488–496 J. econ. Ent. **10.**

Melasina indigena **sp. n.** S. Africa, p. 15, MEYRICK Ann. S. Afric. Mus. **17.**—*M. cnaphalodes* p. 615, *craterodes* p. 617, *picea, tyrophanes,* p. 616, **spp. n.** MEYRICK Ann. Natal Mus. **3.**—*M. acmastis, ptochodora,* Africa, *lignosa, multiplex,* Bengal, **spp. n.** p. 94, MEYRICK Exot. Micr. **2.**

Mesopherna entripta **sp. n.** Queensland, p. 88, MEYRICK T.c.

Microcolona citroplecta p. 49, *cricota, porota,* India, *emporica,* Ceylon, p. 50, *pantomima,* Congo p. 51, **spp. n.** MEYRICK T.c.

Micropteryx, brain, BUXTON Tr. ent. Soc. London **1917** pp. 112-153 pls. vii–x.

Mompha musota, permota, p. 52, *praefinita* p. 53, **spp. n.** Amer. mer., MEYRICK Exot. Micr. **2.**

Monopis meleodes **sp. n.** Asia minor p. 84, MEYRICK T.c.

Morotripta **gen. n.**, *Hyponomeutidae, fatigata* **sp. n.** p. 11 MEYRICK, Ann. S. Afr. Mus. **17.**

Myrmecozela favens p. 87, *typhodes* p. 88, **spp. n.** Africa, MEYRICK Exot. Micr. **2.**

Neosigala **gen. n.** near *Mimozela, ceroplasta* **sp. n.** Queensland, TURNER Trans. R. Soc. S. Aust. **41** p. 118.

Neopastis **gen. n.** *Xyloryctidae, calpidias* **sp. n.** India, MEYRICK, p. 59, Exot. Micr. **2.**

Nephogenes hylophila, pilidiota, lochmaula, cirrhocephala, thiocrossa, carbasea, napaea, argyrodes, stenoptila, Queensland, *syncolla, scitula,* New South Wales, *hypopolia* Queensland and New South Wales, *epipercna* Queensland and Victoria, **spp. n.** TURNER, Trans. R. Soc. S. Aust. **41** p. 95–101.

Nephogenes variabilis synon. with *Mesolecta angustella,* TURNER, Trans. R. Soc. S. Aust. **41** p. 101.

Nepticula porphyreuta **sp. n.** p. 13 MEYRICK Ann. S. Afr. Mus. **17.**—*N. oriastra* **sp. n.** New Zealand p. 247, MEYRICK Tr. N. Z. Inst. **49.**

Nosymna obnubila **sp. n.** New Guinea, p. 161, DURRANT Rep. B. O. U. exp. 2 No. 15 1916.

Octasphales eubrocha **sp. n.** Queensland, TURNER, Trans. R. Soc. S. Aust. **41** p. 120.

Ocystola proselia, esthlopis, idiosticha, ptochodes, acrocosma, xantholoma, phaulopis, eucraera, embolistis, macrotricha, clethrosema, trichophora, auchmera, chrysoïdes, Queensland, *pachythrix* Victoria, *glycydora* New South Wales and Queensland, **spp. n.** TURNER p. 62–68 T.c.

Odites oligectis India p. 56, *analogica* Comoro islds., *thesmia, consecrata,* Madagascar, *diopta* Congo, p. 57, **spp. n.** MEYRICK Exot. Micr. **2.**

Oecophora angustella Synon. with *Mesolecta angustella,* TURNER, Trans. R. Soc. S. Aust. **41** p. 101.

Oliera **gen. n.** *Cecidosidae, argentinana* **sp. n.** BRÈTHES, p. 139 An. Ci. Argent. **82.**

Orthenches vinitincta **sp. n.** New Zealand, p. 244, PHILPOTT Tr. N. Z. Inst. **49.**

Oxylechia **gen. n.** *Gelechiadae, confirmata* **sp. n.** Colombia, MEYRICK p. 39 Tr. ent. Soc. London **1917.**

Pachybela **gen. n.** near *Nephogenes, eremica* Queensland and Victoria, *parisa* Queensland, **spp. n.,** TURNER Trans. R. Soc. S. Aust. **41** p. 94–95.

Paltodora, defined and divided, MEYRICK, p. 113 Ent. Mag. **53.**

Parapsectris anxia **sp. n.** p. 4, MEYRICK Ann. S. Afr. Mus. **17.**

Paraptica **gen. n.** *Tineidae, concinerata* **sp. n.,** MEYRICK, p. 15 Ann. S. Afr. Mus. **17.**

Parochmastis **gen. n.** *Tineidae, styracodes* sp. n. Queensland, MEYRICK p. 86 Exot. Micr. **2.**

Parornix finitimella PIERCE p. 9 Ent. Mo. Mag. **53.**

Pectinophora **gen. n.** p. **346,** type *Gelechia gossypiella* S., structure and habits pp. 347–370 4 pls. BUSCK J. Agric. Res. **9.**

Perixestis **gen. n.** *Xyloryctidae* type *eucephala* Turn., MEYRICK p. 56 Exot. Micr. **2.**

Philaristis **gen. n.** *Xyloryctidae* type *porphyrinella* Walk., MEYRICK p. 54 T.c.

Philobota mysticodes, xanthoprepes, thermophanes, mimetis, lochitis, eucrita, delosema, orthotoma, diaereta, ceratochroa, hilda, euctista, Queensland, *pandora* Tasmania, *leucocosma, megaloxantha* Western Australia, *diacrita, agrapha, enchalca, borborodes, ovestera,* New South Wales, *orthomita, metria, polybotrya,* Victoria, *cnecopis* Northern Territory, **spp. n.** TURNER S. Aust. Trans. R. Soc. S. Austr. **41** pp. 84–93.

Phthorimaea trichinaspis, lenta, perfidiosa, p. 41, *crustaria, densata,* p. 42, *gregalis, urosema,* p. 43, *melanocampta, aquilina, absoluta,* p. 44 *loquax, atrifascia,* p. 45, *altizona, exacta,* p. 46, *epitricha, involuta,* p. 47, **spp. n.** Amer. mer., MEYRICK Tr. ent. Soc. London **1917.**

Phyzanica **gen. n.,** *tapinopa* **sp. n.** Queensland, TURNER Trans. R. Soc. S. Aust. **41** p. 117.

Pierogenes **gen. n.** p. 5, *bactrospila* **sp. n.** MEYRICK Ann. S. Afr. Mus. **17.**

Pleurota chrysopepla, leucogramma, gypsosema, epitripta, Queensland, *leuconeura* Victoria, **spp. n.** TURNER Trans. R. Soc. S. Aust. **41** pp. 76–78.

Polyeucta **gen. n.** superficially like *Wingia, callimorpha,* TURNER p. 104 T.c.

Polyhymno gladiata, conflicta, p. 51, **spp. n.** Amer. mer., MEYRICK Tr. ent. Soc. Lond. **1917.**

Polyhymus multifida **sp. n.** p. 4, MEYRICK Ann. S. Afr. Mus. **17.**

Potniarcha **gen. n.** *Xylorctidae* type *hierastis* Meyr., MEYRICK p. 56 Exot. Micr. **2.**

Prochola sollers, catholica, **spp. n.** Guiana p. 46, MEYRICK T.c.

Protomacha anthracina, straminea, **spp. n.** Queensland, TURNER Trans. R. Soc. S. Aust. **41** pp. 78–79.

Protarchyntis **gen. n.** *Xyloryctidae* type *hospita* Feld., MEYRICK p. 55 Exot. Micr. **2.**

Ptilogenes **gen. n.** *Xyloryctidae* type *acronitis* Busck and includes S. American *Agriophara,* MEYRICK p. 60 T.c.

Pycnozancla **gen. n.** near *Eomystis, erythrodes* **sp. n.** Queensland, TURNER Trans. R. Soc. S. Aust. **41** pp. 109–110

Pyncostola **gen. n.** for part of *Paltodora,* MEYRICK p. 113 Ent. Mag. **53.**

Pyroderces amphipterna India, *sophista,* p. 36, *anthinopa caudata, sirenia,* p. 37, Ceylon, *redimita, faceta, callistrepta,* p. 38, *peristrepta, lampropeda,* India, *catapneusta, terenopa,* p. 39, *clopaea,* Ceylon, *incompta,* Coorg, *myrrhicoma* Queensland, p. 40, **spp. n.,** MEYRICK Exot. Micr. **2.**—*P. rileyi,* BUSCK pp. 362–366 figs. J. Agric. Res. **9.**

Recurvaria xanthotricha, thiodes, p. 38, *aequorea* p. 39, **spp. n.** Amer. mer., MEYRICK Tr. ent. Soc. London **1917.**

Rhadinastis loraria Assam. **sp. n.** p. 43, MEYRICK Exot. Micr. **2.**

Rhinosia; composition, MEYRICK p. 129 Ent. Mag. **53.**

Ridiaschina **gen. n.,** *congregatella* **sp. n.** Argentina, BRÈTHES p. 140 An. Ci. Argent. **82.**

R'diaschinidae fam. n. p. 139, BRÈTHES T.c.

Scaeotes n.n. for *Nemophora* Hb. nec Hoffmanns., type *swammerdammella*, DURRANT p. 162 Rep. B. O. U. exp. 2 No. 15 1916.

Scardia; Australian species, MEYRICK p. 87 Exot. Micr. 2.

Scyrotis athleta, jumping cocoons, MEYRICK p. 62 Ent. Mag. 53.

Scythris erudita sp. n. p. 10, MEYRICK Ann. S. Afr. Mus. 17.—*S. insperselia*, neu für Holland, Raupe, SCHUYT Tyds. Ent. 60 p. xiv.

Setomorpha rutella and allies variation, MEYRICK p. 84 Exot. Micr. 2.

Sindonophora gen. n. *Lamproniidae*, *leuzozona* sp. n., p. 16, MEYRICK Ann. S. Afr. Mus. 17.

Sphyrelata laetifica Queensland and New South Wales, *acritopis*, *ptochica*, *arrhythma*, Queensland, spp. n., TURNER Trans. R. Soc. S. Aust. 41 p. 116.

Stathmopoda osteitis Uganda, *adulatrix*, *nobilitata*, p. 61, *sycastis* p. 62, India, spp. n., MEYRICK Exot. Micr. 2. —*S. seminuda* sp. n. New Zealand p. 244, PHILPOTT Tr. N. Z. Inst. 49.

Stegasta zygotoma sp. n. Colombia p. 48, MEYRICK Tr. ent. Soc. Lond. 1917.

Stenoma reticens Bengal, *emphanes* Burma, spp. n. p. 58, MEYRICK Exot. Micr. 2.

Stereoptila gen. n. *Metachandidae* type *negatella* W., MEYRICK p. 70 T.c.

Stilbosis alsocoma p. 46, *symphracta*, *condylota*, *gnomonica*, p. 47, *devoluta*, *hypanthes*, p. 48, *alcyonis*, *synclista*, p. 49, spp. n. Guiana, MEYRICK T.c.

Synchalara gen. n. *Xyloryctidae* type *rhombota* Meyr., MEYRICK p. 60 T.c.

Syntomactis epochaea India, *strophicodes* Queensland, p. 51, spp. n., MEYRICK T.c.

Teleia heluanensis sp. n. Egypt p. 111, DEBSKI Bull. Soc. ent. Egypte 1912, 1913.—*T. frankeniivorella* Biskra, *zonella* Gafsa, spp. n. p. 474, CHRÉTIEN Ann. Soc. ent. France 85.

Thalerostoma gen. n. near *Limnoecia*, *orthocentra* sp. n. India, MEYRICK p. 42 T.c.

Theatrista gen. n. near *Hapsifera*, *subnigrata* sp. n. E. Africa, MEYRICK p. 95 T.c.

Themeliotis notocrossa sp. n. New Guinea p. 89, MEYRICK T.c.

Tholerostola gen. n. near *Phthorimaea*, *omphalopa* sp. n. Ecuador, MEYRICK p. 40 Tr. ent. Soc. London 1917.

Thyestarcha acrogypsa sp. n. p. 8 MEYRICK Ann. S. Afr. Mus. 17.

Thyromorpha gen. n. near *Pycnozancla* *stibaropis* sp. n. Queensland, TURNER Trans. R. Soc. S. Aust. 41 p. 108–109.

Tinea obnoxia sp. n. p. 13, MEYRICK Ann. S. Afr. Mus. 17.—*T. sextaria*, *asyntacta*, p. 76, *frugivora*, *isopela*, p. 77, India, *tragoplila* Senegal, *exhausta*, *pyriata*, *translucens*, India, *enchrista* Burma, p. 78, *haplodora* Sydney p. 79, spp. n., MEYRICK Exot. Micr. 2.—*T. ankerella* var. n. *nigratella* p. 500, CHRÉTIEN Ann. Soc. ent. France 85.—*T. granella* peculiar food, JOANNIS p. 220 Bull. Soc. ent. France 1917.

Tineola exsculpta, *corticina*, *paramima*, spp. n., India p. 96, MEYRICK Exot. Micr. 2.—*T. biselliella*, life-history, BENEDICT p. 464–466 Science 46.

Tinissa palmodes sp. n. New Guinea p. 89, MEYRICK Exot. Micr. 2.

Talantis chimerina synon. with *Mesolecta angustella*, TURNER Trans. R. Soc. S. Aust. 41 p. 101.

Trachyzancla gen. n. near *Chezala*, *histrica* sp. n. Western Australia, TURNER p. 79–80 T.c.

Trifurcula immundella, egg and larva, SICH p. 117 Ent. Rec. 29.

Wingia synnephela sp. n. Queensland TURNER Trans. R. Soc. S. Aust. 41 p. 103.

Xerocrates gen. n. *Xyloryctidae* type *proleuca* Meyr., MEYRICK p. 54 Exot. Micr. 2.

Xestocasis erymnota Philippines, *tetraconcha* Ceylon, spp. n. p. 62, MEYRICK T.c.

Xygographa gen. n. p. 11 *Hyponomeutidae*, *asaphochalca* sp. n. p. 12, MEYRICK Ann. S. Afr. Mus. 17.

Zelotechna psittacodes **sp. n.** Queensland, TURNER Trans. R. Soc. S. Aust. **41** p. 103.

Zonopetala tephrastis **sp. n.** Queensland, TURNER p. 107 T.c

TRICHOPTERA.

Net-spinning larvae; ALM Ent. Tidskr. **38** p. 285 pl. i.

Limnophilus germanus, Sweden, KLEFBECK Ent. Tidskr. **38** p. 325.

Esperona **gen. n.** *Polycentropini* p. 157, *nilotica* **sp. n.** p. 158, NAVÁS Bull. Soc. ent. Egypte **6**, 1915.

Leptocella splendida **sp. n.** Argentina p. 13, NAVÁS Mem. Ac. Barcelona **13** No. 26.

Macronema centrotum **sp. n.** West Africa p. 15, NAVÁS T.c.

Nonquitus incertus **sp. n.** Tonquin p. 16, NAVÁS T.c.

†*Plecophlebus* **gen. n.** *Odontoceridae*, *nebulosus* **sp. n.** Burmese amber p. 327 figs., COCKERELL Ann. Amer. ent. Soc. **10.**

Primerenca **gen. n.** *Leptoceridae* p. 181, *maesi* **sp. n.** Congo p. 182, NAVÁS Rev. zool. afric. **4**, 1916.

NEUROPTERA.

†Holometabolic *Sialidae* allies, LAMEERE p. 269 Bull. Soc. ent. France **1917.**

Anisoptera romani **sp. n.** Brazil, ESBEN-PETERSEN Ark. Zool. **11** No. 10 p. 14 fig. 2.

Ascalaphus; eggs, ZAKI p. 21 Bull. Soc. ent. Egypte **10.**

Austromantispa **subg. n.**, ESBEN-PETERSEN Ark. Zool. **11** No. 10 p. 11.,

Banyutus maynei **sp. n.**, Congo p. 94, NAVÁS Rev. Zool. Afric. **4** 1914

Bittacus selysi p. 187, figs. 1 & 2 **sp. n.**, *walkeri* figured and redescribed figs. 3 & 4, ESBEN-PETERSEN Ann. S. Afric. Mus. **17.**—*B. montanus* = (*schoute deni* Pet.), LESTAGE pp. 113–120 Rev. zool. Afric. 5.

Centrolysmus **gen. n.** p. 15 near *Spilosmylus*, *epiphanes* China p. 16 fig., *inclytus* Indo-China p. 18 fig., **spp. n.**, NAVÁS Op. Mus. Barcin. **11.**

Chrysopa andresi p. 153, *nymphulina* p. 154, *aegyptiaca* p. 155, **spp. n.** Egypt, *vulgaris* var. n. *africana* p. 152, NAVÁS Bull. Soc. ent. Egypte **6** 1915.—*C. hieronyma* Guatemala p. 8, *laminaris* Argentina p. 9, **spp. n.**, NAVÁS Mem. Ac. Barcelona **13** No. 26.—*C. gasteria* **sp. n.** Colombia p. 277, NAVÁS Ent. Mitt. **6.**—*C. scalai* **sp. n.** Argentina p. 195, NAVÁS Physis. **3.**—*C. vulgaris* var. *catalaunica* fig. p. 18, *prasina* var. *adspersa* fig. p. 20, LACROIX Insecta **7.**—*C. vulgaris vicina* p. 248 fig., *flavifrons* var. n. *decoratissima* p. 249 fig., *inornata* ab. n. *continuata* p. 250 fig., LACROIX Bull. Soc. ent. France **1916.**—*C. prasina* var. n. *dirempta* p. 185, *abbreviata* var. n. *singularis* p. 187, LACROIX Bol. Soc. Aragon **16.**—*C. lanata*, metamorphosis, BRUCH pp. 361–369 Physis **3.**—*Chrysopa* eating its eggs, RIPLEY Ent. News **28** p. 35.

Coloma scriptus **sp. n.** Argentina p. 10, NAVÁS Mem. Ac. Barcelona **13** No. 26.

Conwentzia psociformis, life-history, ARROW pp. 254–257 Ent. Mo. Mag. **53.**

Cueta styczynskii **sp. n.** Congo p. 176 pl. v.f. 4, NAVÁS Rev. Zool. Afric. **4** 1916.—*C. virgata* Kl., NAVÁS p. 361 fig. Ann. Mus. Doria **47.**

Eidoporismus pulchellus **sp. n.** Australia p. 4 fig. 2, ESBEN-PETERSEN Nath. Medd. **68.**

Encyoposis nigrostigma **sp. n.** Congo p. 175 fig., NAVÁS Rev. Zool. afric. **4** 1916.

Euclimacia flavicauda p. 7 Sumatra, *regina* p. 8 fig. 1 Sunda Island (?), *flava* p. 9 Natal, *metallica* p. 10 Celebes, **spp. n.**, ESBEN-PETERSEN Ark. Zool. **11** No. 10.

Formicaleo scolius **sp. n.** Congo p. 93 pl. v. f. 2, NAVÁS Rev. Zool. Afric. **4** 1914.—*F. substigmalis* **sp. n.** Cochin-China p. 10 fig., NAVÁS Insecta **7**.—*F. nubipennis* **sp. n.** Colombia p. 275, NAVÁS Ent. Mitt. **6**.

Gibrella **gen. n.** p. 98 near *Gymnoleon, congolana* **sp. n.** p. 99 pl. v f. 1, NAVÁS Rev. Zool. Afric. **4** 1914.

Griala **gen. n.** near *Formicaleo, macilenta* **sp. n.** Congo pl. v f. 3, NAVÁS p. 95 T.c.

Gymnoleon cognatus **sp. n.** Congo p. 98, NAVÁS T.c.

Hemerobius cercodes **sp. n.** Tonkin, NAVÁS p. 14 fig. Insecta **7**.—*H. tibialis* **sp. n.** Colombia p. 276, NAVÁS Ent. Mitt. **6**.

†*Inocellia tumulata*, COCKERELL p. 391 P. U.S. nat. Mus. **53**.

Leucochrysa vegana **sp. n.** Colombia p. 278, NAVÁS Ent. Mitt. **6**.

Mantispa (*Mantispilla*) *centenaria* p. 2, *castaneipennis* p. 3, *M.* (*Necyla*) *perparva* p. 4, *picea* p. 6, **spp. n.** South and Central Africa, ESBEN-PETERSEN Ark. Zool. **11** No. 10.—*M. calceata* **sp. n.** Argentina p. 11, NAVÁS Mem. Ac. Barcelona **13** No. 26.

Moza longiventris **sp. n.** Argentina p. 194 NAVÁS Physis **3**.

Myrmeleon cavipennis **sp. n.** Scioa p. 360 NAVÁS Ann. Mus. Doria **47** 1916.

Nagacta schoutedeni **sp. n.** Congo p. 92 NAVÁS Rev. Zool. Afric. **4** 1914.

Necyla cercata **sp. n.** Congo p. 178 NAVÁS T.c.

Neteja **gen. n.** p. 96 *Creagrini, sollicita* **sp. n.** Congo p. 97 NAVÁS T.c.

Neula **gen. n.** near *Gonzaga, mesana* **sp. n.** Colombia NAVÁS p. 280 Ent. Mitt. **6**.

Nineta flava var. n. *wesmaeli* p. 277 NAVÁS T.c.

Nocaldria **gen. n.** p. 362 near *Neuroleon, signata* **sp. n.** E. Africa p. 363 NAVÁS Ann. Mus. Doria **47** 1916.

Nodita **gen. n.** p. 278 (= *Leucochrysa* Banks) NAVÁS Ent. Mitt. **6**.

Nothochrysa polemia **sp. n.** Lesbos p. 248 NAVÁS Bull. Soc. ent. France 1916.—*N. temerata* **sp. n.** Congo p. 100 fig. NAVÁS Rev. Zool. Afric. **4** 1914.

Osmylides; taxonomy with new tribes, table of genera NAVÁS Op. Mus. Barcin. **11** pp. 1–21.

Panorpa communis var. n. *incerta* p. 22 fig. LACROIX Insecta **7**.

Parasemidalis decipiens Gespinst, ROEPKE Zool. Med. **3** p. 274.

Salvaza **gen. n.** near *Formicaleo, cornutus* **sp. n.** Tonkin fig. NAVÁS p. 12 Insecta **7**.

†*Sisyra disrupta* **sp. n.** Isle of Wight oligocene p. 381 f. 13 COCKERELL P. U.S. Nat. Mus. **52**.

Stenosmylus australiensis **sp. n.** p. 1 fig. 1 ESBEN-PETERSEN Nath. Medd. **68**.

Suphalasca recondita **sp. n.** Congo p. 91 NAVÁS Rev. Zool. Afric. **4** 1914.

†*Sycopteron* **gen. n.**, *symmetrica* **sp. n.** Commentry (?) Panorpidae p. 6 pl. ii figs. 1 and 2, BOLTON Mem. Manchester Soc. **61** No. 2.

Tmesibasis regia **sp. n.** Congo p. 173, NAVÁS Rev. Zool. afric. **4** 1916.

Vella flaccida **sp. n.** Colombia p. 274, NAVÁS Ent. Mitt. **6**.

DIPTERA.

Classification of Diptera, larvae and pupae, MALLOCH Bull. Illinois Lab. pp. 161–409 30 pls. Part 1 Nematocera and Brachycera.

Bibliographical introduction to the study of British Diptera, GRIMSHAW Pr. Phys. Soc. Edinburgh **20** pp. 78–117.

Swedish spp., RINGDAHL Ent. Tidskr. **38** pp. 302–311.

Norfolk and Suffolk Diptera list, MORLEY & ATMORE Tr. Norfolk Soc. **10** pp. 1–180 1915.

CECIDOMYIIDAE.

Asphondylia websteri **sp. n.** Arizona p. 562, FELT J. econ. Ent. **10.**

Coccodiplosis **gen. n.** p. 238, *pseudococci* **sp. n.** Java Biologie, DE MEYERE Tyds. Ent. **60** p. 239.

Diarthronomyia hypogaea habits, ESSIG J. Econ. Ent. **9** 1916 pp. 461–468 pls. 34, 35, ff. 32–34.

Dyodiplosis andropogonis **sp. n.** India p. 371, FELT Ent. News. **28.**

Feltiella venatoria **sp. n.** Illinois p. 195, FELT J. N. York ent. Soc. **25.**

Hormomyia ischaemi, FELT p. 369 Ent. News **28.**

Janetiella siskiyou **sp. n.** Am. bor. p. 194, FELT J. N. York ent. Soc. **25.**

Lasioptera fluitans **sp. n.** India p. 73, FELT Ent. News **28.**—*L. piriqueta* **sp. n.** Porto Rico p. 193, FELT J. N. York ent. Soc. **25.**

Parallelodiplosis cattleyae, WEISS p. 25 pl. iv f. 1 Ent. News **28.**

Physalidicola **gen. n.** near *Spaniocera argentata* sp. n. Buenos Aires, BRÈTHES Physis **3.**

Pseudhormomyia fluvialis p. 74, *cornea* p. 76, **spp. n.**, India, FELT Ent News **28.**

Pseudomikiola **gen. n.** p. 411, *lippiae* **sp. n.** Entre Rios p 412, BRÈTHES Physis **3.**

†*Winnertziola burmitica* **sp. n.** p. 42 fig., COCKERELL Psyche **24.**

MYCETOPHILIDAE.

Allodia dentica **sp. n.** California p. 315, GUTHRIE Ann. ent. Soc. Amer. **10.**

†*Brachypeza graciosa* **sp. n.** Aquitanien, Allemagne, MEUNIER Amsterdam Verh. Akad. **20** p. 10.

†*Burmacrocera* **gen. n.**, *petiolata* **sp. n.** Burmese amber p. 326 figs., COCKERELL Ann. Amer. ent. Soc. **10.**

Johannsenia **gen. n.** near *Brachypeza, aurei* **sp. n.** California, GUTHRIE p. 316 figs. pl. xxvi Ann. ent. Soc. Amer. **10.**

Mycetophila maculosa, permata p. 314, *alata* p. 315, **spp. n.**, California, GUTHRIE Ann. ent. Soc. Amer. **10.**

Sciara coprophila life history, HUNGERFORD J. Econ. Ent. **9** 1916 pp. 538–549 pls. xli, xlii.

†*Sciara burmitina* **sp. n.** in amber p. 20 fig., COCKERELL Ann. ent. Soc. Amer. **10.**—†*S. heydeni* **sp. n.** Aquitanien, Allemagne, MEUNIER Amsterdam Verh. Ak. **20** p. 12.

†*Syntemna sepulta* **sp. n.** Aquitanien, Allemagne, MEUNIER T.c.

CHIRONOMIDAE.

Bezzia pilipennis **sp. n.** Lapland, LUNDSTRÖM Naturw. Unters. Sarekgeb. **4** p. 674.

Ceratopogon attacking other insects, PEYERIMHOFF Bull. Soc. ent. France **1917** pp. 250–253.

Chironomus aquæducti **sp. n.** Japan, MATSUMURA Dobuts. Z. Tokyo **29** pp. 1–7.—*C. decorus* natural history, PING Canad. Ent. **49** pp. 418–420 pl. xxi.

Culicoides judicandus **sp. n.** Luzon p. 108, BEZZI Philipp. J. Sci. D. **12.**

Orthocladius doloplastoides **sp. n.** Swedish Lapland, LUNDSTRÖM Naturw. Unters. Sarekgeb. **4** p. 670.

Trichotanypus appropinquatus **sp. n.** Swedish Lapland, LUNDSTRÖM Naturw. Unters. Sarekgeb. **4** p. 673.

CULICIDAE.

Zanzibar Culicidae, ADERS Bull. ent. Res. **7** pp. 391–396.

Biological observations, FELT & STAGE Albany Univ. St. N. Y. Mus. Bull. **186** 1916 pp. 65–70.

The mosquitoes of New Jersey and their control, HEADLEE Agric. Exp. Sta. New Jersey **276** 1915 pp. 1–135 ff. 1–94.

Pupae of African mosquitos, INGRAM & MACFIE Bull. ent. Res. **8** pp. 73–91 with many figs.

Larvae of West-African Culicidae, INGRAM & MACFIE T.c. pp. 135–154 figs. and 4 pls.

Larval respiration, experiments, MACFIE Bull. ent. Res. **7** pp. 277–

Grenada species breeding places etc., MACDONALD Bull. ent. Res. **7** pp. 259–264 pls. iii & iv.

Dytiscus, as destroyers, CHIDESTER p. 454 Ent. News **28.**

Aedes, allies & subgenera, EDWARDS p. 203 Bull. ent. Res. **7**; *ceylonicus* p. 221, *yerburyi* Ceylon, *leicesteri* Kuala Lumpur p. 222 figs., **spp. n.**, ID. T.c.—*A.* notes on californian pp. 11–19, *fisheri* **sp. n.** p. 19, DYAR Insec. inscit. **5.**—*A. euedes* Canada p. 714, *euochrus* Brit. Columbia p. 716, *decticus* Ontario p. 737, *centrotus* p. 747 Canada, *diantaeus* U. S. p. 758, **spp. n.**, DYAR & KNAB Mosquitoes **4.**

A. aloponotum p. 98, *aboriginis* p. 99, *altiusculus* p. 100, **spp. n.**, *mimesis* p. 116, *prodotes* p. 118, **spp. n.**, U. S., DYAR Insec. inscit. **5.**—*A. acrophilus* **sp. n.** Canada p. 127, DYAR T.c.—*A. zoosophus, gonimus*, p. 165, *niphadopsis, innuitus*, p. 166, **spp. n.**, U. S., DYAR & KNAB Insec. inscit. **5.**—*A. argenteus* (Poiret) correct name for yellow fever mosquito, KNAB Insec. inscit. **4** 1916.—*A. curriei*, DYAR pp. 122–124 Insec. inscit. **5.**—*A. idahoensis* larva, DYAR p. 187 T.c.

Aedomyia; species, genitalia figs., EDWARDS pp. 228, 229 Bull. ent. Res. **7.**

Anopheles; table of Panama species, DUNN pp. 15–19 Ent. News **28.**—*A. kinoshitai, taiwanensis*, **spp. n.**, Formosa, KOIZUMI Dobuts. Z. Tokyo **29** p. 134–142.—*A. neivai* **sp. n.** Panama p. 986, DYAR & KNAB Mosquitoes **4.**—*A. hylephilus* **sp. n.** Amer. mer. p. 39, DYAR & KNAB Insec. inscit. **5.**—*A.* spp. Philippine Is.: relation to malaria; *febrifer* Banks **sp. n.** ♀, p. 384, WALKER & BARBER Philippine J. Sci. Manila Sect. B. Trop. Med. **9** 1914 p. 381–439.—*A. albotaeniatus* var. n. *montanus* p. 273, STANTON & HACKER Bull. ent. Res. **7.**—*A. claviger* and aguefever in Denmark, ESBEN-PETERSEN Flora og Fauna **1917** p. 35–39.—*A. plumbeus*, EDWARDS p. 201 Bull. ent. Res. **7.**

Armigeres; ♀, genitalia, figs. EDWARDS pp. 203–208; *durhami* p. 206, *maiae* p. 205, **spp. n.**, Malay States, EDWARDS Bull. ent. Res. **7.**

Climacura **subgen. n.** of *Culex* type *C. melanurus* p. 452, HOWARD, DYAR & KNAB Mosquitoes Carnegie Inst. Pub. No. 159 **3.**

Culex; revision of north-american, *C.* (*Mochlostyrax*) *perihleptus* **sp. n.** p. 181, DYAR & KNAB pp. 170–183 Insec. inscit. **5.**—*C. hayashi* **sp. n.** Japan, YAMADA Dobuts Z. Tokyo **29** p. 61–72.—*C.* (*Transculicia* subg. n.) *eleuthera* **sp. n.** Bahamas p. 184, DYAR Insec. inscit. **5.**—*C. tapinops* **sp. n.** Argentina p. 227, larva figs. p. 228, BRÈTHES Physis. **3.**—*C. delys* p. 317, *apateticus* p. 321, **spp. n.**, Panama, *caraibeus* p. 257, *eremita* p. 261, *sphinx* p. 301, *mastigia* p. 426; **spp. n.** West Indies, HOWARD, DYAR & KNAB Mosquitoes, Carnegie Inst. Pub. No. 159 **3.**—*C. tritaeniorhynchus*, etc., EDWARDS pp. 224–226 Bull. ent. Res. **7.**—*C. nigripes*, synonymy, pp. 167–169, DYAR & KNAB Insec. inscit. **5.**

Lesticocampa **spp. n.** Panama: *dicellaphora* p. 166, *lampropus* p. 167, HOWARD, DYAR & KNAB Mosquitoes Carnegie Inst. Pub. No. 159 **3.**

Lophoceratomyia, table, EDWARDS p. 226 Bull. ent. Res. **7.**

Lutzia allostigma **sp. n.** Nicaragua to Panama p. 471, HOWARD, DYAR & KNAB Mosquitoes Carnegie Inst. Pub. No. 159 **3.**

Myzomyia rossii, ludlowi, indefinita, notes on, SWELLENGREBEL Gen. Tydschr. Ned. Ind. **57** 1917 p. 490; Med. Burg. Gen. Dienst Ned. Ind. **1917** 4 p. 42–47.—*M. flava* **sp. n.** Sumatra, SWELLENGREBEL p. 807 T.c.

Ochlerotatus; characters composition p. 211, *O.* (*Finlaya*) *koreicus* Korea p. 212, *fulgens* Zanzibar p. 213, *O.* (*Diceromyia*) *adersi* Zanzibar p. 214, *O.* notes, EDWARDS pp. 215-221, Bull. ent. Res. **7.**

Rachionotomyia bambusa **sp. n.** Japan, YAMADA Dobuts. Z. Tokyo **29** pp. 61–72.

Sabethes goeldii **sp. n.** Trinidad p. 24, HOWARD, DYAR & KNAB Mosquitoes Carnegie Inst. Pub. No. 159 **3.**

Skusea; ♂, genitalia figs., EDWARDS p. 223 Bull. ent. Res. **7.**

Stegomyia variegata, albopicta, synonymy p. 209, genitalia p. 210 figs., EDWARDS T.c.—*S. fasciata*, metamorphosis, MACFIE Bull. ent. Res. **7** pp. 297–307 figs.

Taeniorhynchus nigrosignatus **sp. n.** = (*conopas* Theo.), EDWARDS p. 224 Bull. ent. Res. **7.**

Toxorhynchites regius and *subulifer*, synonymy, EDWARDS p. 202 T.c.

Transculicia **subg. n.** *vide Culex.* Dyar

Uranotaenia basalis Mexico p. 917 **sp. n.,** DYAR & KNAB Mosquitoes **4.**

PSYCHODIDAE.

† *Trichomyia swinhoei* **sp. n.** Burma in amber p. 21 fig., COCKERELL Ann. ent. Soc. Amer. **10.**

BIBIONIDAE, SIMULIIDAE.

Bibio johannis, early stages, MORRIS Ann. Appl. Biol. **4** pp. 91–114 pl. ii.—*B. abbreviatus*, STRICKLAND p. 600 figs. Agric. Gaz. Canada **3.**

† *Bibio gurnetensis* f. 4, *oligocenus* f. 5, **spp. n.,** Isle of Wight tertiary p. 375, COCKERELL P. U. S. nat. Mus. **52.**

† *Plecia winchesteri* p. 375, *explanata* p. 376, **spp. n.,** Colorado tertiary, COCKERELL T.c.—† *P. decapitata* **sp. n.** Florissant miocene p. 391, COCKERELL P. U. S. nat. Mus. **53.**

† *Protomyia sluiteri* **sp. n.** Aquitanien Allemagne, MEUNIER Amsterdam Verh. Ak. **20** p. 14.

Simulium amazonicum, characters, synonymy, LUTZ Mem. Inst. Oswaldo Cruz **9** p. 63–66 pl xxv.

TIPULIDAE, PTYCHOPTERIDAE.

Antocha monticola **sp. n.** Colorado p. 23 ALEXANDER Canad. Ent. **49.**

Atarba capensis p. 147 pl. x f. 10 **sp. n.,** ALEXANDER Ann. S. Afric. Mus. **17.**

Chionea primitiva p. 204 *noveboracensis* p. 205 *gracilis* p. 206 **spp. n.,** New York figs., ALEXANDER Canad. Ent. **49.**—*C. alpina*, MARCHAND Psyche **24** p. 142–153 2 pls.

Crypteria americana **sp. n.** Oregon p. 29, ALEXANDER Canad. Ent. **49.**

Ctedonia, ENDERLEIN p. 57 Zool. Anz. **49.**

Ctenacroscelis albovittatus p. 163 pl. xi f. 27 & xiv f. 57, ALEXANDER Ann. S. Afric. Mus. **17.**

Ctenacroscelis rex **sp. n.** Burma p. 22, ALEXANDER Insec. inscit. **5.**

Dicranomyia melleicauda **sp. n.** Colorado p. 22, ALEXANDER Canad. Ent. **49.**—*D. lightfooti* p. 140 pl. x f. 2, *marleyi* p. 142 f. 4, *peringueyi* p. 142 f. 12, **spp. n.,** *populipes* Karsch p. 141 f. 3, ALEXANDER Ann. S. Afric. mus, **17.**

Dirhipis **gen. n.** near *Ctedonia, riedeliana* **sp. n.** Chile ENDERLEIN p. 58 figs. Zool. Anz. **49.**

Elephantomya aurantiaca p. 146 pl. x f. 8 **sp. n.,** ALEXANDER Ann. S. Afric. Mus. **17.**

Eptanytarsus **gen. n.,** *japonibius* **sp. n.,** MATSUMURA Dobuts. Z. Tokyo **29** p. 1–7 [the position of this genus has not been sent by the Japanese Recorder].

Eriocera lativentris p. 113, *crassipes* p. 114, **spp. n.,** Philippines BEZZI Philipp. J. Sci. D. 12.

Erioptera (*Empeda*) *bonae spei* p. 148 pl. x f. 11, **sp. n.,** *perengueyi* Bergr. p. 149 pl. x f. 12, ALEXANDER Ann. S. afric. Mus. **17.**—*E. luzonica* **sp. n.** p. 7, ALEXANDER Insec. inscit. **5.**—*E.* (*Empeda*) *cinereipleura, noctivagans*, **spp. n.,** U. S., ALEXANDER p. 200 Canad. Ent. **49.**

Gnophomya elegans Wied. p. 151 pl. xi f. 15, ALEXANDER Ann. S. afric. Mus. **17.**

Gonomya spuria Bergr. p. 151 pl. xi f. 16, ALEXANDER T.c.

Gonomyella **subg. n.** for *brevifurca* p. 153 pl. xi f. 18 *natalensis* p. 152 f. 17, **spp. n.,** ALEXANDER T.c.

Icriomastax ocellata figs. ENDERLEIN p. 62 Zool. Anz. **49.**

Leptotipula **n. gen.,** *limnophiloides* pl. xi f. 22 & xiii f. 43 xiv f. 54 **sp. n.,** ALEXANDER Ann. S. afric. mus. **17.**

Libnodes capensis p. 143 pl. x f. 6 **sp. n.,** ALEXANDER T.c.

Libnotes opaca marginalis, **spp. n.**, Philippines p. 116 BEZZI Philipp. J. Sci. D. **12**.

Limnobia indigena jacksoni subsp. n. p. 199, ALEXANDER Canad. Ent. **49**.

Limnophila dubiosa p. 156, *transvaalica* p. 155 pl. xi f. 19, **spp. n.**, *frugi* Bergr. pl. xi f. 20 ALEXANDER Ann. S. afric. Mus. **17**.—*L. subaptera* p. 207, *L.* (*Prionolabis*) *cressoni* p. 208, **spp. n.**, California ALEXANDER Canad. Ent. **49**.

Longurio minusculus p. 162 pl. xi f 26 & xiii f 51 xiv f 55 **sp. n.**; *bonae spei* Bergr. pl. x f. 25 & xiii f. 48 xiv f. 55, ALEXANDER Ann S. afric. Mus. **17**.

Megistrocera hirsuta p. 159 pl. xi f. 24 **sp. n.**; *bicauda* Speis. pl. xi f. 23 & pl. xiii f. 42 ALEXANDER T.c.

Mesomyites C. = *Styringomyia*, COCKERELL p. 141 Entomol. **50**.

†*Mongoma cruciferella* **sp. n.** Isle of Wight oligocene p. 374 f. 3, COCKERELL P. U. S. nat. Mus. **52**.

Nephrotoma edwardsi p. 173 pl. xii f. 35, *strenua* p. 174 f. 36 xiv f. 63, *tigrina* p. 177 f. 39 f. 67, *umbripennis* p. 172 f. 34 & f. 62, *unicingulata* p. 175 f. 37 & f. 65, **spp. n.**, *antennata* Wied. p. 177 f. 38 & f. 64, *petiolata* Macq. p. 179 f. 41, *tincta* Walk. f. 40 f. 66 ALEXANDER Ann. S. afric. Mus. **17**.

Orimargula philippina **sp. n.** p. 6, ALEXANDER Insec. inscit **5**.

Ormosia nimbipennis p. 24, *nesocera* p. 25. *megacera* p. 26 **spp. n.**, U. S., ALEXANDER Canad. Ent. **49**.

Pachyrhina pyrenaica **sp. n.** p. 304 figs., PIERRE Bull. Soc. ent. France **1917**.

Platylimnobia **gen. n.** p. 149, *barnardi* p. 150, pl. xiii f. 45. ALEXANDER, Ann. S. Afric. mus. **17**

Podoneura anthracogramma Bergr. p. 151 pl. x. f. 14, ALEXANDER T.c.

Pselliophora praefica p. 110, *tripudians* p. 111, **spp. n.**, Philippines, *suspirans* var. n. *hilaris* p. 109, BEZZI Philipp. J. Sci. D **12**.

Ptychoptera capensis p. 139 pl. x f. 1 **sp. n.**, ALEAXNDER Ann. S. Afric. Mus. **17**.

Rhabdomastix flava coloradensis subsp. n. p. 28, ALEXANDER Canad. Ent. **49**.

Rhamphidia capensis p. 145 pl. x f. 7 **sp. n.**, ALEXANDER Ann. S. Afric. Mus. **17**.

Rhaphidolabis sessilis, *major*, **spp. n.**, Colorado, p. 210 ALEXANDER Canad. Ent. **49**.

Rhipidia afra Bergr. p. 143 pl. x f. 5, ALEXANDER Ann. S. Afric. Mus. **17**.

†*Riphidia brodiei* **sp. n.** Isle of Wight Tertiary, fig., COCKERELL p. 373 P. U. S. nat. Mus. **52**.

Scepasma **gen. n.** type *bipunctatum* Phil., ENDERLEIN p. 60 Zool. Anz. **49**.

Styringomya vittata Edw. p. 147 pl. x f. 9 & xiii fs. 46 & 47, ALEXANDER Ann. S. Afric. Mus. **17**.

†*Styringomyia venusta*, notes on, MEUNIER Tydschr. Ent. **60** p. 370–375.

Tipula; the palaearctic, *crassiventris* Tyrol p. 28, *intermixta* Spain p. 40, *fragilicornis* Italy p. 44, *vafra* Finland p. 51, *virgatula* Mongolia p. 58, *cisalpina* Italy p. 59, *bosnica* p. 79, *cava* Germany p. 89, *onusta* Alps p. 94, *falcata* p. 96, *fasciculata* p. 103, Italy, *bimaculata* Sicily p. 105, *adeps* Spain p. 109 *interserta* Austria p. 112, **spp. n.**, REIDEL Abh. Lehrerver. Crefeld 1913 [from Wien. ent. Zeit. **33** p. 270].—*T. caffra* p. 171 f. 33, *chionoides* p. 164 text fig. 2, pl. xiii f. 44, *coronata* p. 169 f. 32, *jocosa* p. 168 f. 31, *pomposa* p. 168 f. 30, f. 52., f. 60, *zambeziensis* p. 166 f. 29, f. 53, f. 58, **spp. n.**, *soror* Wied. f. 28, f. 49, f. 58, ALEXANDER Ann. S. Afric. Mus. **17**.—*T. alexandriana* p. 146, *vicina* p. 148, *conspicua* p. 149, *xanthostigma* p. 150, **spp. n.**, U. S. pl. xi, DIETZ Ent. News **28**.—*T. paludosa*, larva, natural history, RENNIE Ann. appl. Biol. **3** p. 116–137, 3 pls.—*T. mikado* Westw. to *Holorusia*, ENDERLIEN p. 60 Zool. Anz. **49**.

†*Tipula gardneri* **sp. n.** Isle of Wight oligocene p. 374, f. 1, COCKERELL P. U. S. nat. Mus. **52**.

Trentepohlia pictipennis **sp. n.** Luzon p. 115, BEZZI Philipp. J. Sci. D **12**.

Trichodolichopeza **n. subgen.** *hertipennis* pl. xi f. 21 **sp. n.**, ALEXANDER Ann. S. Afric, Mus. **17** p. 157.

Tricyphona autumnalis p. 30, *cervina* p. 62, *glacialis* p. 63, **spp. n.**, U. S. ALEXANDER Canad, Ent. **49**.—*T. degenerata* **sp. n.** Colorado p. 209, ALEXANDER Canad. Ent. **49**.

Trimicra inconspicua Loew pl. x f. 13, p. 149, ALEXANDER Ann. S. Afric. Mus. **17**.—*T. angularis* **sp. n.** Utah p. 26, ALEXANDER Canad. Ent. **49**.

STRATIOMYIDAE.

The Stratiomyidae of Lolland-Falster Denmark (Danish), JØRGENSEN Flora og Fauna **1917** p. 13.

Actina simmondsii **sp. n.** New Zealand p. 184, MILLER Tr. N.Z. Inst. **49**.

Beris saltusans p. 190, *caliginosa* p. 191, *lacuans* p. 192, *refugians* p. 193, **spp. n.**, New Zealand, MILLER T.c.

Camptopelta **gen. n.** p. 23, *aldrichi* **sp. n.** New Mexico p. 24, WILLISTON Ann. ent. Soc. Amer, **10**.

Coenomyia ferruginea localities, DAVIS p. 134 and p. 196 J. N. York ent. Soc. **25**.

Eupachygaster henshawi **sp. n.** Illinois p. 338, MALLOCH Bull. Illinois Lab. **12**.

Exaireta seolforalis p. 179, *hoheria* p. 180, **spp. n.**, New Zealand MILLER, Tr. N.Z. Inst. **49** .

Oxycera approximata p. 326, *aldrichi* p. 329, *albovittata* p. 330, **spp. n.**, Amer. bor., MALLOCH Bull. Illinois Lab. **12**.

†*Oxycera* (?) *contusa* **sp. n.** miocene Colorado p. 20, COCKERELL P. biol. Soc. Washington **30**.

Systegnum **gen. n.** near *Catatasis*, *africanum* **sp. n.**, ENDERLEIN p. 66 Zool. Anz. **49**.

Xylomyia pallidifemur **sp. n.** Illinois p. 343, MALLOCH Bull. Illinois Lab. **12**.

TABANIDAE.

Zanzibar Tabanidae, ADERS Bull. ent. Res. **7** pp. 397 & 398.

Food of Tabanidae, SNYDER p. 208–211 P. ent. Soc. Washington **18**

Rearing larvae, MARCHAND p. 469–473 J. econ. Ent. **10**.

Chrysops, larvae, habits, MARCHAND pp. 149–163 pls. x-xii J. N. York ent. Soc. **25**.

Corizoneura kurandae **sp. n.** Queensland p. 748, TAYLOR P. Linn. Soc. N.S.W. **41**.

Diatomineura crocea **sp. n.** Queensland p. 746, TAYLOR T.c.—*D. abdominalis* **sp. n.** N.S.W. p. 209, RICARDO Ann. Nat. Hist. **19**.

Ectenopsis australis **sp. n.** Australia p. 217, RICARDO T.c.

Elaphromyia **gen. n.** *carteri* **sp. n.** Queensland, TAYLOR p. 749 P. Linn. Soc. N.S.W. **41**.

Erephopsis doddi **sp. n.** W. Australia p. 211, RICARDO Ann. Nat. hist. **19**.

Haematopota montanus, p. 225, *hindostani* p. 226, **spp. n.** India, RICARDO T.c.

Silvius ater p. 750, *subluridus* p. 751, **spp. n.** Australia, *australis* eggs p. 752, TAYLOR P. Linn. Soc. N.S.W. **41**.—*S. grandis*, *fuscipennis*, p. 212, *nigripennis* p. 213, *fergusoni* p. 214, *niger* p. 215, *montanus*, *insularis*, p. 216, **spp. n.** Australia, RICARDO Ann. Nat. hist. **19**.

Tabanus angusticollis, p. 218, *clavicallosus* p. 219, *milsonis* p. 220, *kershawi* p. 221, *T.* (*Theriopleictus*) *cirrus* p. 222, *neocirrus* p. 223, Australia, *pacificus* Fiji p. 224, **spp. n.**, RICARDO T.c.—*T. griseohirtus* p. 753, *trypherus* p. 755, *griseoannulatus* p. 756, *australis* p. 757, *darwinensis* p. 758, *milsoni* p. 760, *spadix* p. 761, **spp. n.** Australia, *mastersi* n.n. for *gregarius* Tayl. p. 754, *doddi* n.n. for *abstersus* Tayl. p. 758, TAYLOR P. Linn. Soc. N.S.W. **41**.—*T. annularis*, *daeckei*, p. 269, *petiolatus*, *uniformis*, p. 270, *nantuckensis* p. 271, **spp. n.** U.S., HINE Ohio J. Sci. **17**.—*T. coniformis* nom. n. (= *confinis* Becker), FREY Naturw. Unters. Sarekgeb. **4** 6 p. 681.—*T. exclusus*, characters, VILLENEUVE p. 253 Bull. Soc. ent. France **1917**.—*T. striatus*, development and habits, MITZMAIN Philippine J. Sci. Manila Sect. B. Trop. Med. **8** 1913 p. 197–221 pls. i-vii.

LEPTIDAE.

Atherix fascipennis **sp. n.** Luzon p. 117, BEZZI Philipp. J. Sci. D **12.**

Chrysopilus diplostigma **sp. n.** Luzon p. 120, BEZZI T.c.

Schizella **gen. n.** *Rhagionidae, furcicornis* **sp. n.** Luzon pl. i. f. 1, BEZZI p. 119 T.c.

ASILIDAE.

Dioctria brevis p. 117, *longicornis* with var. *tibialis, media, pleuralis,* p. 118, *flavipes* p. 119, **spp. n.** U.S., BANKS Psyche **24.**

†*Dioctria ? pulveris* **sp. n.** Florissant miocene, COCKERELL p. 392 P.U.S. nat. Mus. **53.**

Epholciolaphria partialis n.n. for *partita* W. 1860, BEZZI p. 124 Philipp. J. Sci. D **12.**

Pogonosoma cyanogaster **sp. n.** Luzon p. 125, BEZZI T.c.

Saropogon rubricosus, p. 121, *specularis* p. 122, **spp. n.** Philippines, BEZZI T.c.

BOMBYLIIDAE.

†*Acreotrichites* **gen. n.,** *scopulicornis* **sp. n.** Florissant miocene f. 6, p. 376, COCKERELL P.U.S. nat. Mus. **52.**

Anthrax californicus p. 69 f. 2, *nigripennis* p. 70 figs. 4 and 5, *signatipennis* p. 74 f. 10, *pilosa* p. 76, **spp. n.** U.S., *arethusa* var. n. *autumnalis* p. 71 f. 8, COLE J. N. York ent. Soc. **25.**

†*Dolichomyia tertiaria* **sp. n.** miocene Colorado p. 20, COCKERELL P. biol. Soc. Washington **30.**

Heterotropus trotteri **sp. n.** Libya p. 21, BEZZI Ann. Mus. Doria **47** 1916.

Systropus valdezi **sp. n.** Luzon p. 126, BEZZI Philipp. J. Sci. D **12.**

†*Systropus rottensis* **sp. n.** Aquitanien, Allemagne, MEUNIER Amsterdam Verh. Ak. **20** p. 9.

NEMESTRINIDAE.

Hirmoneura exotica, habits, eggs, figs., BRUCH pp. 427–430 Physis **3.**

EMPIDAE.

†*Burmitempis* **gen. n.,** *halteralis* **sp. n.** Burmah amber, COCKERELL p. 367 figs. Amer. J. Sci. **44.**

†*Electrocyrtoma* **gen. n.,** *burmanica* **sp. n.** in amber p. 22, COCKERELL Ann. ent. Soc. Amer. **10.**

Haplomera varasi **sp. n.** Chile p. 79, BRÈTHES Revist. Chilena **20** 1916.

†*Mesomyites* **gen. n.,** *concinnus* **sp. n.** Isle of Wight oligocene f. 7, p. 377, COCKERELL P.U.S. nat. Mus. **52.**

Rhamphomyia longestylata p. 682, *hambergi* p. 684 **spp. n.** Swedish Lapland, FREY Naturw. Unters. Sarekgeb. **4** 6.

†*Rhamphomyia hypolitha* **sp. n.** Florissant Miocene f. 8, p. 378, COCKERELL P.U.S. nat. Mus. **52.**

DOLICHOPIDAE.

Campsicnemus arcuatus p. 125 fig., *nigripes* p. 126 fig., **spp. n.** U.S., VAN DUZEE Ent. News **28.**

Diaphorus californicus p. 33, *nudus* p. 34, *junctus* p. 35, *snowii* p. 36, *sparsus* p. 37, *inornatus, vulsus,* p. 38, **spp. n.** U.S., VAN DUZEE Psyche **24.**

Liancalus limbatus **sp. n.** California p. 127 figs., VAN DUZEE Ent. News **28.**

Mesorhaga varipes **sp. n.** Massachusetts p. 123, VAN DUZEE T.c.

Nothosympycnus inornatus p. 340, *abbreviatus* p. 341, **spp. n.** U.S., VAN DUZEE Canad. Ent. **49.**

Sympycnus fascisentris p. 337, *caudatus* p. 338, *canadensis* p. 338, **spp. n.** Amer. bor. VAN DUZEE T.c.

PHORIDAE.

Aphiochaeta communiformis **sp. n.** Holland p. 139, *latra quadriseta* var. nov. p. 143 Holland, *rubida* **sp. n.** p. 144 Deutschland, *correlata* **sp. n.** Holland p. 146, SCHMITZ Heerlen, Nathist. gen. Limb. **1917.**

Dohrniphora concinna pachycera var. n. Holland, *rostralis* var. n. Deutschland, SCHMITZ p. 111 T.c.

Hypocera ocellata p. 116, *germanica* p. 117, spp. n. Deutschland, SCHMITZ T.c.

Mallochina gen. n., *M. exemta*, notes on, SCHMITZ p. 123 T.c.

Phora fasciata, destroying *Coccinella*, DU BUYSSON p. 249 Bull. Soc. ent. France **1917**.

SYRPHIDAE.

Economic *Syrphidae* in California, DAVIDSON J. Econ. Ent. **9** 1916 p. 454–457.

Brachyopa daeckei p. 360, *diversa* p. 361, spp. n. U.S., JOHNSON Canad. Ent. **49**.

Brachyopa rufiabdominalis sp. n. Colorado p. 226, JONES Ann. ent. Soc. Amer. **10**.

Chrysogaster ocularia sp. n. Madagascar p. 102 pl. vi f. 1, HERVÉ–BAZIN Rev. Zool. Afric. **4** 1916.

Cinxia carolinensis sp. n. p. 209 pl. xvi figs. A–D, METCALF Ent. News **28**.

Criorhina intermedia sp. n. U.S. p. 153, JOHNSON Psyche **24**.

Eristalis vitripennis, alpinus, AMMITZBÖLL Ent. Tidskr. **38** p. 104.

Eupeodes braggii, weldoni, spp. n., U.S. p. 221, JONES Ann. ent. Soc. Amer. **10**.

Lathyroptalmus madagascariensis p. 104 pl. vi f. 3, *abdominalis* p. 106 f. 5, spp. n. Madagascar, HERVÉ–BAZIN Rev. Zool. afric. 4 1916.

Mallota flavoterminata p. 228, *palmerae* p. 229, spp. n. U.S., JONES Ann. ent. Soc. Amer. **10**.

Melanostoma cherokeensis p. 219, *johnsoni, monticola*, p. 220, spp. n. U.S., JONES T.c.

Microdon similis sp. n. Colorado p. 219, JONES T.c.—*Microdon piperi* p. 136, *modestus, senilis*, p. 139, *scutifer* p. 141, U.S., *remotus* Cuba p. 142, spp. n., KNAB P. biol. Soc. Washington **30**.

Microxylota gen. n. p. 230, *robii* p. 234 sp. n. Colorado, JONES Ann. ent. Soc. Amer. **10**.

Paramicrodon decipiens sp. n. Java, DE MEYERE Tyds. Ent. **60** p. 242.

Pipiza californica sp. n. p. 417, DAVIDSON Ent. News **28**.

Sphaerophoria cleoae sp. n. Maine p. 210 pl. xvi f. F., METCALF Ent. News **28**.—*S. interrupta* sp. n. Colorado p. 225, JONES Ann. ent. Soc. Amer. **10**.

Syrphus flukei, marginatus, p. 222, *meadii* p. 223, *medius, similis*, p. 224, spp. n. U.S., JONES T.c.

Tropidia cooleyi sp. n. Montana p. 342, SEAMANS Ent. News **28**.

Volucella rufomaculata sp. n. Colorado p. 227, JONES Ann. ent. Soc. Amer. **10**.

Xylota nigromaculata sp. n. Colorado p. 229, JONES T.c.

CONOPIDAE.

Stylogaster bakeri sp. n. Luzon p. 157, BEZZI Phillipp. J. Sci. D **12**.

OESTRIDAE.

Notes on North-american Oestridae, TOWNSEND J. N. York ent. Soc. **25** pp. 98–105.

Bogeria scudderi sp. n. Washington p. 27, TOWNSEND Insec. inscit. **5**.

Cephenomyia trompe, BERGMAN Ent. Tidskr. **38** p. 7–10, 11; 135–143, pl. xix-xxvi.

Cobboldia noverei p. 156, *parumspinosa* p. 158, larvae pp. 152–155, GEDOELST Rev. Zool. afric. **4** 1916.

Cuterebra allies, revision, TOWNSEND pp. 23–28 Insec. inscit. **5**.—*C. infulata* pl. xxvii f. 4, *nigricans* f. 2, *sarcophagoides* f. 5, p. 99, *schmalzi* f. 3 p. 100, spp. n., Am. mer., LUTZ Mem. Inst. Oswaldo Cruz **9**.

Dermatobia hominis, oviposition vicarious (by an intermediate), KNAB P, ent. Soc. Washington **18** p. 179–182.

Gastrophilus equi, penetration of larva, ROUBAUD C.R. Ac. Sci. **163** p. 453.—*G. haemorrhoidalis* etc., DOVE Bull. 597 U.S. Dep. Agric. Ent. 5 pls.; BISHOPP p. 182-187 Psyche 24.—*G. asininus* p. 105 pl. xxviii f. 9, LUTZ Mem. Inst. Oswaldo Cruz **9**.

Gedoelstia haessleri sp. n. Africa p. 148, GEDOELST Rev. Zool. afric. **4** 1916.

Hypoderma gazellae **sp. n.** Massai p. 263, GEDOELST T.c.—*Hypoderma*, in Ohio, MOTE Ohio J. Sci. **17** pp. 169–176

Kirkia surcoufi **sp.n.** Africa, GEDOELST Rev. Zool. afric. **4** pp. 144–148 1916.

Oedemagena tarandi, BERGMAN Ent. Tidskr. **38** p. 6, 10, 13–26, 113–115, pl. i fig. 1., pl. vi–xviii.

Oestromyia marmotae **sp. n.** Central Asia p. 158, GEDOELST Rev. Zool. afric. **4** 1916.

Oestrus disjunctus p. 259, *compositus* p. 260, **spp. n.** Africa, GEDOELST T.c.

Pseudogametes hermanni p. 102 pl. xxviii. f. 7, LUTZ Mem. Inst. Oswaldo Cruz **9**.

Rogenhofera dasypoda p. 100 pl. xxviii f. 8, LUTZ T.c.

Rondanioestrus **gen. n.**, *apivorus* p. 465 **sp. n.**, VILLENEUVE Ann. S. Afric. Mus. **15**.

MUSCIDAE CALYPTRATAE.

Anatomy and biology of Anthomyiidae larvae, KEILIN Parasitol. **9** pp. 325–450 pls. v–xv and 41 text-figs.

On Entoparasitic larvae; *Panzeria minor*, *Ernestia connivens*, *Winthemia quadripustulata*, *Frivaldzkia distincta*, *Campylochaeta obscura*, *Tachina rustica*, *Goniocera enigmatica*, NIELSON (Danish with English summary) København Nath. Medd. **68** p. 23–36 20 figs.

Sarcophagid larvae from the painted turtle, CHIDESTER J. Parasit. Urbana 2 1915 p. 48–49 ff. 1, 2.

Key to subfamilies of *Anthomyiidae*, MALLOCH pp. 406–408 Canad. Ent. **49**.

Wintering of muscid flies, KISLIUK pp. 285–294 Ohio J. Sci. **17**.

Species reared from *Zygaena*, VILLENEUVE pp. 259, 260 Bull. Soc. ent. France **1916**.

Sheep-maggot flies in Australia. FROGGATT & FROGGATT p. 25 and pp. 34–37 Agric. Dep N.S.W. Farmer's Bull. **113**.

Parasitic fly of silkworms, habits (Japanese), AMARI Tokyo, Sangyo Shikenjo Hokoku [Report of the Sericultural Institute] **2** 1917 p. 251–286.

Eversion of the ptilinum during the emergence of *Musca domestica*, MALLY S. Afric. Journ. Sc. **17** p. 599.

Cordyceps-growth on imago, HOWARD P. ent. Soc. Washington **18** p. 196.

Acanthodotheca **gen. n.** p. 159 type *Sarcophaga prohibita* Aldr., TOWNSEND Insec. inscit. **5**.

Acridiophaga **gen. n.** type *Sarcophaga aculeata* Aldr., TOWNSEND p. 46 P. biol. Soc. Washington **30**.

Allognota agromyzina, larva p. 360, fig., KEILIN Parasitol. **9**.

Allophorocera montana **sp. n.** U.S. p. 140, SMITH Psyche **24**.

Amblycoryphenes **gen. n.** type *Sarcophaga amblycoryphae* Coq., TOWNSEND p. 162 Insec. inscit. **5**.

Amobiopsis ornata **sp. n.** Brazil p. 221, TOWNSEND Bull. Amer. Mus. **37**.

Andinoravinia **gen. n.** p. 190, *rufipes* **sp. n.** Peru p. 196, TOWNSEND P. biol. Soc. Washington **30**.

†*Anthomyia laminarum* **sp. n.** Burma in amber p. 21, COCKERELL Ann. ent. Soc. Amer. **10**.—*A. persepulta* **sp. n.** Florissant miocene p. 380, COCKERELL P. U.S. nat. Mus. **52**.

Apollenia = *Thelychaeta* subg., VILLENEUVE p. 337 Ann. Soc. ent. Fr. **85**.

Argoravinia **gen. n.** p. 190 type *Sarcophaga argentea* T., TOWNSEND P. biol. Soc. Washington **30**.

Argyrophylax albincisa and *Pseudochaeta argentifrons*, WALTON p. 189 pl. xiv P. ent. Soc. Washington **18**.

Atactopsis **gen. n.**, *facialis* **sp. n.** Brazil p. 229, TOWNSEND Bull. Amer. Mus. **37**.

Bercaeopsis **gen. n.** p. 192 type *Sarcophaga tetra* Aldr., TOWNSEND P. biol. Soc. Washington **30**.

Blaesoxiphotheca **gen. n.** p. 159 type (*Sarcophaga coloradensis* Aldr. ♀) = *caudata* **sp. n.**, TOWNSEND Insec. inscit. **5**.

Borborothinia **gen. n.**, *pubescens* **sp. n.** India, TOWNSEND p. 188 Rec. Ind. Mus. **13**.

Bucentes abbreviata **sp. n.** Madagascar p. 199, VILLENEUVE Rev. zool. afric. **4** 1916.

Calliphora vomitoria and oysters, MACGREGOR p. 18 Ent. Mo. Mag. **53.**

Camptopsis **gen. n.** p. 162, *miamensis* **sp. n.** Florida p. 163, TOWNSEND Insec. inscit. **5.**

Carcelia evolans, VILLENEUVE p. 195 Rev. zool. afric. **4.**

Chaetoravinia **gen. n.** p. 190 type *Helicobia quadrisetosa* Coq., TOWNSEND P. biol. Soc. Washington **30.**

Chaetosturmia **gen. n.** p. 193, *barbata* **sp. n.** Madagascar p. 194, VILLENEUVE Rev. zool. afric. **4,** 1916.

Chloroidia **gen. n.,** *flavifrons* **sp. n.** Burma, TOWNSEND p. 196 Rec. Ind. Mus. **13.**

Chlororhinia **gen. n.,** *viridis* **sp. n.** Shillong, TOWNSEND p. 191 T.c.

Chortophila pilipyga **sp. n.** France p. 440, VILLENEUVE Parasitol. **9.**

Cistudinomyia **gen. n.** type *Sarcophaga cistudinis* Aldr., TOWNSEND p. 48 P. biol. Soc. Washington **30.**

Copecrypta ruficauda devia subsp. n. p. 227, TOWNSEND Bull. Amer. Mus. **37.**

Cyanopsis **gen. n.,** *costalis* **sp. n.** Brazil p. 228, TOWNSEND T.c.

Cyphocera varia var. n. *hova*, VILLENEUVE p. 191 Rev. zool. afric. **4** 1916.

Deuteroclara **gen. n.** near *Clara* p. 207, *regalis* **sp. n.** Madagascar p. 208, VILLENEUVE T.c.

Dexopollenia **gen. n.,** *testacea* **sp. n.** Assam, TOWNSEND p. 201 Rec. Ind. Mus. **13.**

Dexosarcophaga **gen. n.,** *transita* **sp. n.** Brazil, TOWNSEND p. 221 Bull. Amer. Mus. **37.**

Dialyta flavitibia, ♂, JOHANNSEN p. 327 Ent. News **28.**

Diaphanomyia **gen. n.,** *aurea* **sp. n.** Brazil p. 229, TOWNSEND Bull. Amer. Mus. **37.**

Diplopota **gen. n.** p. 272 for *Himantostoma mochii*, BEZZI Boll. Lab. Portici **12.**

Eleodiomyia **gen. n.** type *Sarcophaga eleodis* Aldr., TOWNSEND p. 160 Insec. inscit. **5.**

Eucelatoria australis aurescens subsp. n. p. 226, TOWNSEND Bull. Amer. Mus. **37.**

Euidiella **gen. n.** p. 192 type *Musca discolor* Fab., *unicolor* Borneo, *purpurea* India, **spp. n.** p. 193, TOWNSEND Rec. Ind. Mus. **13.**

Euloeviopsis **gen. n.,** *setosa* **sp. n.** Brazil, TOWNSEND p. 222 Bull. Amer. Mus. **37.**

Euparafrontina **gen. n.** p. 17, *martinezi* **sp. n.** Lima p. 18, BRÈTHES An. zool. afric. **1.**

Euphoroceropsis **gen. n.** p. 49, *alba* **sp. n.** Mexico p. 50, TOWNSEND P. biol. Soc. Washington **30.**

Eupododexia **gen. n.** near *Pododexia* p 200, *festiva* p. 201, *diaphara* p. 202, **spp. n.** Madagascar, VILLENEUVE Rev. zool. afric. **4** 1916.

Euravinia **gen. n.** p. 191 type *Ravinia communis* Park., TOWNSEND P. biol. Soc. Washington **30.**

Euscopoliopteryx **gen. n.** p. 223, *nebulosa* **sp. n.** Brazil p. 224, TOWNSEND Bull. Amer. Mus. **37.**

Eusynamphoneura **gen. n.** type *Idia seriepunctata*, TOWNSEND p. 189 Rec. Ind. Mus. **13.**

Eutheresiops **gen. n.** p. 48, *trixoides* **sp. n.** Chihuahua p. 49, TOWNSEND P. biol. Soc. Washington **30.**

Fletcherimyia **gen. n.** p. 191 type *Sarcophaga fletcheri* Aldr., TOWNSEND T.c.

Gigantotheca **gen. n.** p. 192, *galapagensis* **sp. n.** p. 196, TOWNSEND T.c.

Glaucosarcophaga **gen. n.** type *knabi* = (S. *villipes* Aldr.), TOWNSEND p. 45 T.c.

Glossina; CHRISTY Ann. trop. Med. **11** pp. 279–282.—*G. morsitans* in Katanga, SCHWEIZ Bull. ent. Res. **8** pp. 165–168; in Tanganyika, ID. T.c. pp. 169–175.—*G. brandoni*, CHUBB p. 252 Ann. Durban Mus. **1** 1916.

†*Glossina armatipes* **sp. n.** Florissant miocene p. 19, COCKERELL P. biol. Soc. Washington **30.**

Graphomyia maculata, larva pp. 354–360, figs., KEILIN Parasitol **9.**

Gymnopeze denudata is ♀ *albipennis*, VILLENEUVE p. 259 Bull. Soc. ent. France 1916.

Gymnosoma ventricosum **sp. n.** Java, DE MEYERE Tydschr. Ent. **60** p. 245.

Hammomyia paludis **sp. n.** Massachusetts p. 323, JOHANNSEN Ent. News **28.**

Heteropterina biseta **sp. n.** Madagascar, VILLENEUVE p. 199 Rev. zool. afric. **4** 1916.

Himantostoma mochii **sp. n.** Erythraea, BEZZI p. 91 Boll. Lab. Portici **12** figs.

Homoeonychia rapae **sp. n.** U.S. p. 139, SMITH Psyche **24.**

Hydrotaea; larvae pp. 399–404, figs., KEILIN Parasitol. **9.**

Hyperecteina polyphyllae **sp. n.** Europe p. 307, VILLENEUVE Bull. Soc. ent. France **1917.**

Idiella sikorae **sp. n.** Madagascar p. 204, VILLENEUVE Rev. zool. afric. **4** 1916.

Idielliopsis **gen. n.,** *similis* **sp. n.** India, TOWNSEND p. 190 Rec. Ind. Mus. **13.**

Jicaltepecia **gen. n.,** *rafaela* **sp. n.** Mexico, TOWNSEND p. 49 P. biol. Soc. Washington **30.**

Kellymyia **gen. n.** p. 191 type *Sarcophaga kellyi* Aldr., TOWNSEND T.c.

Leptohylemyia coarctata, larva, KEILIN pp. 121–123 figs. Bull. ent. Res. **8.**

Lyperosia exigua, natural history, HILL pp. 763–768 P. Linn. Soc. N.S.W. **41.**

Melanochelia riparia, larva pp. 331-353 figs., KEILIN Parasitol. **9.**

Metalliopsis **gen. n.,** *setosa* **sp. n.** India, TOWNSEND p. 198 Rec. Ind. Mus. **13.**

Metoposarcophaga **gen. n.** type *Sarc. pachyprocta* Park., TOWNSEND p. 46 P. biol. Soc. Washington **30.**

Miltoravinia **ge.. n.** p. 191 type *Sarcophaga planifrons* Aldr., TOWNSEND T.c.

Musca; indian (?) **spp. n.** but not so indicated, AWATI Ind. J. med. Res. **5** pp. 160–191 10 pls.—*M. domestica* and other Muscids in Montana, PARKER pp. 278–282 Ent. News **28.**—Life-history, DOVE, J. Econ. Ent. **9** 1916 p. 528–538.

Musca and *Calliphora,* suspension of nomenclatorial rules, STILES p. 231 Ent. News **28.**

Muscina; larvae pp. 405–420, figs., KEILIN Parasitol. **9.**

Mydaea; larvae pp. 393–399, figs., KEILIN Parasitol. **9.**

Myospila meditabunda, larva p. 388–392, figs., KEILIN T.c.

Myxactia **gen. n.** *Thryptoceratidae, inclinata* **sp. n.** Madagascar, VILLENEUVE Rev. zool. afric. **4** 1916.

Neoarchytas inambarica aurifrons subsp. n. p. 228, TOWNSEND Bull. Amer. Mus. **27.**

Notochaetopsis **gen. n.** p. 162 type *Sarcophaga masculina* Aldr., TOWNSEND Insec. inscit. **5.**

Ommaleskia **gen. n.,** *fumosa* **sp. n.** Brazil, TOWNSEND p. 227 Bull. Amer. Mus. **37.**

Opsophasiopteryx **gen. n.** p. 220, *mima* **sp. n.** Brazil p. 223, TOWNSEND T.c.

Opsophytopsis **gen. n.,** *insularis* **sp. n.** Galapagos, TOWNSEND p. 163 Insec. inscit. **5.**

Oxysarcodexia **gen. n.** p. 191 type *Sarcophaga peltata* Aldr., TOWNSEND P. biol. Soc. Washington **30.**

Paraphasiopsis **gen. n.,** *mellicornis* **sp. n.** Brazil, TOWNSEND p. 232 Bull. Amer. Mus. **37.**

Pararoubaudia **subg. n.** vide *Roubaudia.* [illegible]

Parasarcodexia **gen. n.** p. 192 type *Sarcophaga parkeri* Aldr., TOWNSEND P. biol. Soc. Washington **30.**

Paratactopsis **gen. n.,** *setosa* **sp. n.** Brazil p. 230, TOWNSEND Bull. Amer. Mus. **37.**

Paratheresia brasiliensis **sp. n.** Brazil p. 222, TOWNSEND T.c.

Parodomyia **gen. n.** p. 225, *paradoxica* **sp. n.** Brazil p. 226, TOWNSEND T.c.

Peltopyga **gen. n.** p. 191 type *Sarcophaga celarata* Aldr., TOWNSEND P. biol. Soc. Washington **30.**

Pentatomophaga **gen. n.** *Phasiinarum* p. 246, *bicincta* **sp. n.** Java p. 247, DE MEYERE Tyds. Ent. **60.**

Phaonia cincta, anomalies, KEILIN p. 193–196 figs. Bull. Soc. ent. France **1917.**

Phaonia; larval anatomy and biology pp. 362–387, figs., KEILIN Parasitol. **9.**—*P. parenti* **sp. n.** (but in note said to be *canescens* Stein), VILLENEUVE Parasitol. **9.**—*P.* (*Hyetodesia*) *keilini* **sp. n.** England p. 441, COLLIN Parasitol. **9.**

Phorbia brassicae, LOVETT, Agric. Exp. Sta. Oregon Rep. **1911–12** 1913 p. 138–169 ff. 16–18.

Phormia azurea, larval habits, ROUBAUD Bull. biol. **51** pp. 420–430.

Phumosia bitincta **sp. n.** Madagascar p. 206, VILLENEUVE Rev. zool. afric. **4** 1916.

Phyllogaster littoralis **sp. n.** Illinois p. 228, and p. 352, MALLOCH Canad. Ent. **49.**—*P. robustus* **sp. n.** U.S. p. 148, JOHNSON Canad. Ent. **49.**

Phyto melanocephala, THOMSON C. R. Soc. Biol. **80** p. 785–788.

Pilatea unicolor p. 137, *ruficornis* p. 138, **spp. n.**, U.S., SMITH Psyche **24.**

Pollenia rudis, bionomics, WEBB & HUTCHISON pp. 197–199 P. ent. Soc. Washington **18.**

Polleniopsis **gen. n.** p. 201, *pilosa* **sp. n.** India p. 202, TOWNSEND Rec. Ind. Mus. **13.**

Polygaster brasiliensis **sp. n.** p. 224, TOWNSEND Bull. Amer. Mus. **37.**

Prosthetocirca **gen. n.** p. 192, *cana* **sp. n.** Galapagos p. 196, TOWNSEND P. biol. Soc. Washington **30.**

Protocalliphora azurea, larval blood-sucking, structure, COUTANT J. Parasitol **1** p. 135–150, 1915.

Pseudogonia madagascariensis, suspecta **spp. n.** p. 192, VILLENEUVE Rev. zool. afric. **4** 1916.

Pseudotachinomyia **gen. n.**, *webberi* **sp. n.** New England, SMITH p. 54 Psyche **24.**

Rafaelia **gen. n.** type *Sarcophaga rufiventris* Aldr., TOWNSEND p. 45 P. biol. Soc. Washington **30.**

Raimondia **gen. n.**, *uruhuasi* **sp. n.** Peru, TOWNSEND p. 47 T.c.

Raviniopsis **gen. n.** p. 160, *aurea* **sp. n.** Peru p. 161, TOWNSEND Insec. inscit. **5.**

Rhynchomyiopsis **gen. n.**, *indica* **sp. n.**, TOWNSEND p. 195 Rec. Ind. Mus. **13.**

Roubaudia (*Pararoubaudia* subg. n.) *bisetosa* **sp. n.** Africa p. 125, *R. pruinosa* **sp. n.** p. 124, *rufescens* var. n. *pallida* p. 125, ROUBAUD & VILLENEUVE Rev. zool. afric. **4** 1914.

Saraceniomyia **gen. n.** p. 192 type *Sarcophaga sarraceniae* R., TOWNSEND P. biol. Soc. Washington **30.**

Sarcodexiopsis **gen. n.** p. 190 type *Sarcophaga biseriata* Aldr., TOWNSEND T.c.

Sarcophaga subtuberosa Guam p. 89, *crinita* p. 92, *orientalis* p. 94, *knabi* p. 96, Philippines, **spp. n.**, PARKER P. U.S. nat. Mus. **54.**—*S. froggatti* **sp. n.** Australia, TAYLOR p. 265 Bull. ent. Res. **7.**—*S. fulvipes dissidia* subsp. n. p. 157 fig., PARKER Canad. Ent. **49.**

Sarcophodexia **gen. n.** type *Sarcophaga hamata* Aldr., TOWNSEND p. 161 Insec. inscit. **5.**

Sarothromyiops **gen. n.** p. 191, *cinctus* **sp. n.** Galapagos p. 196, TOWNSEND P. biol. Soc. Washington **30.**

Scarabaeophaga **gen. n.** p. 160, type *Sarcophaga utilis* Aldr., TOWNSEND Insec. inscit. **5.**

Sciasma frontalis **sp. n.** New England, SMITH p. 56 Psyche **24.**

Sericophoromyia marshalli **sp. n.** Madagascar p. 195, VILLENEUVE Rev. zool. afric. **4** 1916.

Spathimeigenia nigriventris **sp. n.** U.S. p. 139, SMITH Psyche **24.**

Spirobolomyia **gen. n.** type *Sarcophaga singularis* Aldr., TOWNSEND p. 43 Proc. biol. Soc. Washington **30.**

Stomoxys calcitrans, development and habits, MITZMAIN Philippine J. Sci. Sect. B. **8** 1913 p. 29–48.

Strongyloneura nepalana p. 196, *nebulosa, viridana* p. 197, *coerulana* p. 198, **spp. n.** India etc., TOWNSEND Rec. Ind. Mus. **13.**

Sturmia insularis **sp. n.** Madagascar p. 193, VILLENEUVE Rev. zool. afric. **4** 1916.—*S. semitestacea* fig., PIERRE p. 67 Bull. Soc. ent. France 1917.

Synactia **subg. n.** of *Myxactia* for *Bonannia foliacea* Pand., VILLENEUVE p. 199 Rev. zool. afric. **4.**

Synamphoneuropsis **gen. n.**, *viridis* **sp. n.** India, TOWNSEND p. 199 Rec. Ind. Mus. **13.**

Syringosoma **gen. n.** p. 232, *pennipes* **sp. n.** Brazil p. 233, TOWNSEND Bull. Amer. Mus. **37.**

Tephomyiella **gen. n.** p. 164 type *Sarcophaga atlanis* Aldr., TOWNSEND Insec. inscit. **5.**

Tetramerinx brevicornis **sp. n.** Illinois p. 226, MALLOCH Canad. Ent. **49.**

Thelychaeta pubera p. 340, *grossa* p. 341, *oculosa* p. 342, *connivens*, *jactatrix*, p. 343, *T.* (*Apollenia*) *versipellis* p. 344, *fasciculata* p. 346, *natalensis* p. 347, *T. nigripes* p. 348, *cinerascens* p. 349, *dubiosa*, *longicauda*, p. 350, *albibasis* p. 351, *distinguenda* p. 352, *cuprapex* p. 353, sp. *a.* p. 354, **spp. n.** Africa, VILLENEUVE Ann. Soc. ent. France **85.**

Thylepticocnema **gen. n.** type *Sarcophaga incurva* Aldr., TOWNSEND p. 43 Proc. biol. Soc. Washington **30.**

Thysanopsis **gen. n.**, *albicauda* **sp. n.** Brazil, p. 231, TOWNSEND Bull. Amer. Mus. **37.**

Titanogrypa **gen. n.** type *Sarcophaga melanopyga* var. *alata* Aldr., TOWNSEND p. 44 Pr. biol. Soc. Washington **30.**

Trichinochaeta **gen. n.**, *orbitalis* **sp. n.** Brazil, TOWNSEND p. 224 Bull. Amer. Mus. **37.**

Trichometallea **gen. n.**, *pollinosa* **sp. n.** India, TOWNSEND p. 194 Rec. Ind. Mus. **13.**

Trixosarcophaga **gen. n.** p. 191 type *Sarcophaga aurigena* T., TOWNSEND P. biol. Soc. Washington **30.**

Trochiloleskia **gen. n.** p. 226, *flava* **sp. n.** p. 227, TOWNSEND Bull. Amer. Mus. **37.**

Tulaeopoda **gen. n.** p. 190 type *Sarcophaga pervillosa* Aldr., TOWNSEND P. biol. Soc. Washington **30.**

Umbelusia **gen. n.** p. 194, *analis* **sp. n.** E. Africa p. 197, TOWNSEND T.c.

Wohlfahrtia magnifica, GOUGH p. 23 Bull. Soc. ent. Egypte **10.**

Wohlfartiopsis **gen. n.** type *Sarcophaga johnsoni* Aldr., TOWNSEND p. 45 P. biol. Soc. Washington **30.**

Xanthomelanopsis brasiliensis **sp. n.** p. 233, TOWNSEND Bull. Amer. Mus. **37.**

Ypophaemyia malacosomae brasiliensis subsp. n. p. 231, TOWNSEND T.c.

Zygastropyga **gen. n.** p. 191, *aurea* **sp. n.** Arizona p. 195, TOWNSEND P. biol. Soc. Washington **30.**

Zygosturmia protoparcis meridionalis subsp. n. p. 231, TOWNSEND Bull. Amer. Mus. **37.**

MUSCIDAE ACALYPTRATAE.

Agromyza tephrosiae **sp. n.** Java, DE MEYERE Tyds. Ent. **60** p. 249.—*A. pruni* **sp. n.** p. 235 pl. x ff. 1–3, GROSSENBACHER New York Bull. Torrey Bot. Cl. **42** 1915 p. 227–239 pls. x.

Anommonia **gen. n.** near *Limosina*, *appendicigera* p. 121, *schwabi* p. 122, Kamerun, **spp. n.**, SCHMITZ Zool. Med. **3.**

Bactrocera cucurbitae, natural history, anatomy, BACK & PEMBERTON Bull. U.S. Dep. Agric. Ent. **491** 64 pp. 23 pls.

Bathyparia **gen. n.** Chloropidae p. 56 *praeclara* **sp. n.** Durban p. 57 figs., LAMB Ann. Nat. Hist. **19.**

Ceratitis capitata, BACK & PEMBERTON Bull. 536 U.S. Dep. Agric. Ent.

Ceropsilopa **gen. n.** *Ephydridae* p. 340, *nasuta* **sp. n.** Trinidad p. 341, CRESSON Ent. News **28.**

Chlorops zeylanica **sp. n.** p. 51, LAMB Ann. Nat. hist. **19.**

Chromatopterum tacteiventre **sp. n.**, Ceylon p. 49, LAMB Tc.

Chyliza pallidipes **sp. n.** Ceylon p. 271, LAMB T.c.

Cyrtonotum tumidum **sp. n.** Ecuador p. 68, ENDERLEIN Zool. Anz. **49.**

Dacus mochii p. 65, *woodi* p. 66, *hamatus* p. 67, *blepharogaster* p. 68, *erythraeus* p. 69, **spp. n.** Africa, BEZZI Bull. ent. Res. **8.**

Desmometopa, food-habits, PEYERIMHOFF p. 215 Bull. Soc. ent. France **1917.**

Diplocentra maculiventris p. 69 Africa, *hendeliana* Surinam p. 72, **spp. n.**, ENDERLEIN Zool. Anz. **49.**

Drosophila ampelophila, nutrition, etc., GUYÉNOT Bull. biol. 51 pp. 1–330 4 pls.—*D. melanogaster*, food, etc., BAUMBERGER P. Ac. Washington **3** pp. 122–126.—*Drosophila*, food for rearing, BAUMBERGER Amer. Nat. **51** p. 447.

Elassogaster plagiata **sp. n.** Luzon p. 135, BEZZI Philipp. J. Sci. D **12.**

Ephydra macellaria, larva, habits, WILLCOCKS p. 102 Bull. Soc. ent. Egypte **9.**

Epochra canadensis, LOVETT Agric. Exp. Sta. Oregon **1911-12** 1913 p. 135.

Euprosopia trivittata p. 150, *gigas* p. 151, *millepunctata* p. 152, *lepidophora* p. 153, *longicornis* p. 154, **spp. n.**, Philippines, BEZZI Philippine J. Sci. D **12.**

Eurina oculata **sp. n.** Madras p. 42 fig., LAMB Ann. Nat. hist. **19.**

Euxesta notata, larva, habits, HUTCHISON p. 171-177 pl. xii P. ent. Soc. Washington **18.**

Haplegis nitens **sp. n.** Durban p. 48, LAMB Ann. Nat. hist. **19.**

Heleomyza breviciliata p. 124, *crepusculascens* p. 127, **spp. n.** Holland, SCHMITZ Heerlen Nath. Gen. Limb. Meded. **1916** [1917].

Helomyza ingens p. 266, *balteata* p. 268, *aspinosa* p. 269, **spp. n.**, Africa, LAMB Ann. Nat. Hist. **19.**

Hydrellia tibialis **sp. n.** Idaho p. 341, CRESSON Ent. News **28.**

Hydromyza confluens, habits, eggs, WELCH Ann. ent. Soc. Amer. **10** pp. 35–45 pl. iii.

Lagarocerus anomalum, pulchellum, p. 44, *infuscatum* p. 47, **spp. n.**, Durban figs., LAMB Ann. Nat. hist. **19.**

Leptocera (*Limosina*) *hostica* p. 140, *glabrescens*, Italy, *v-atrum* Berlin, p. 141, *hungarica* p. 142, *bequaerti* Petrograd p. 143, **spp. n.**, VILLENEUVE Bull. Soc. ent. France **1917.**

Limosina (*Leptocera*) *pectinifera* p. 333, *setaria* p. 334, *rustica* p. 335, *cribrata* p. 336, *moesta* p. 337, **spp. n.**, Europe, VILLENEUVE T.c. 1918.—*L. quadrilineata* nom. n. for *ornata*, DE MEYERE Tyds. Ent. **60** p. 324.—*L. pseudonivalis*, notes on, SCHMITZ Tyds Ent. **60** p. 232 figs.

Lonchaea sarekensis **sp. n.** Swedish Lapland, FREY Naturw. Unters. Sarekgeb. **4** 6 p. 694.—*L. aristella*, natural history, SILVESTRI p. 123–146 figs., Boll. Lab. Portici **12.**

Loxocera rufa, variation, synonymy, LAMB p. 272 Ann. Nat. Hist. **19.**

†*Melieria atavina* **sp. n.** Florissant miocene p. 379, COCKERELL P. U. S. nat. Mus. **52.**

Naupoda unifasciata **sp. n.** Luzon p. 140, BEZZI Philipp. J. Sci. D. **12.**

Nothybus triguttatus **sp. n.** Mindanao p. 155, BEZZI T.c.

Oedoparea oblita **sp. n.** Falkland islds. p. 388, LAMB Tr. ent. Soc. London **1916.**

Ops nigra **sp. n.** Mozambique p. 50, LAMB Ann. Nat. hist. **19.**

Oscinosoma discretum (Bezzi) **sp. n.** Italy p. 147, SILVESTRI Boll. Lab. Portici **12.**

Pachylophus frontellinus valid p. 36 figs., *lituraticus* **sp. n.** Durban p. 37, LAMB Ann. Nat. hist. **19.**

Parectecephala varifrons **sp. n.** Durban p. 52, LAMB T.c.

Pemphigonotus **gen. n.** Chloropidae p. 54, *mirabilis* **sp. n.** Melville isld. figs. p. 55, LAMB T.c.

Phytomyza aquilegia, life history, CORY J. Econ. Ent. **9** 1916 pp. 419–424 pl. xxxi figs. 25–26.

Plagiostenopterina hendeli **sp. n.** Philippines p. 125, KNAB Insec. inscit. **5.**

†*Protoscinis* **gen. n.** *Chloropidae, perparvus* **sp. n.** Isle of Wight oligocene f. 11 p. 380, COCKERELL P. U. S. nat. Mus. **52.**

Prosopophorella **n. n.** for *Prosopophora*, DE MEYERE Tyds. Ent. **60** p. 349.

Pterogenia valida p. 142, *tristis* p. 143, *parva* p. 144, *laticeps* p. 145, *luteipennis* p. 147, *centralis* p. 148, **spp. n.**, Philippines, BEZZI Philipp. J. Sci. D **12.**

Rhagoletis pomonella, BRITTAIN & GOOD, Bull. Dep. Agric. Nova Scotia **9** 70 pp. 6 pls.

Rivellia hendeliana **sp. n.** Palawan p. 138, BEZZI Philipp. J. Sci. D. **12.**

Scatophaga rufiventris **sp. n.** France p. 308, VILLENEUVE Bull. Soc. ent. France **1917.**

Scatophila variabilis **sp. n.** California p. 341, CRESSON Ent. News **28.**

Scotinosoma typicum **sp. n.** Mindanao p. 136, BEZZI Philipp. J. Sci. D. **12.**

Steleocerus nigricornis, quadrivittatus, p. 39, *flavipes* p. 40, *latiseta* p. 41, **spp. n.**, S. Africa, LAMB Ann. Nat. hist. **19.**

Synhoplos **gen. n.** *Ephydridae, sturdeanus* p. 390 figs., *neglectus* p. 393, **spp. n.**, Falkland islds., LAMB Tr. ent. Soc. London **1916.**

Schroederia; type, ENDERLEIN p. 67 Zool. Anz. **49.**

Trichocypsela alluaudi **sp. n.** Soudan p. 139, VILLENEUVE Bull. Soc. ent. France **1917.**

Tridacus d'emmerezi **sp. n.** Mauritius p. 63, BEZZI Bull. ent. Res. **8.**

Trypeta; nomenclatorial, ENDERLEIN p. 228 Wien. ent. Zeit. **33.**

Tylopterna **gen. n.** *Ortalidae* p. 131, *monstrosum* **sp. n.** Luzon p. 133 pl. i f. 2, BEZZI Philipp. J. Sci. D. **12.**

†*Urortalis* **gen. n.** *Richardiinae* p. 378, *caudatus* **sp. n.** Florissant miocene p. 379, figs. 9 & 10, COCKERELL P. U.S. nat. Mus. **52.**

Xenaspis extranea **sp. n.** Luzon p.134, BEZZI Ph lipp. J. Sci. D. **12.**

PUPIPARA.

Notes on habits, etc., Nycteribiidae, SCOTT Parasitol. **9** pp. 593–600.

Eremocteria **gen. n.** for *Penicillidia progressa*, SCOTT p. 600 pl. xxiv figs. 1–5 Parasitol. **9.**

Tripselia **gen. n.** for *Nycteribia fryeri*, SCOTT p. 608 T.c.

APHANIPTERA.

The taxonomic value of the copulatory organs of the females in the order *Siphonaptera*, FOX Washington Treas. Dept. U. S. Publ. Hlth. Serv. Hyg. Lab. Bull. No. **97** 1914 (19–25) pls. vi–xxii.

Identification of some *Siphonaptera* from the Philippine islands, FOX Washington Treas. Dept. U. S. Publ. Hlth. Serv. Hyg. Lab. Bull. No. **97** 1914 18.

Bemerkungen über Suctoria xxviii (Holländisch), OUDEMANS Ber. Ned. Ent. Ver. **4** p. 396.

Ceratophyllus stimsoni California from *Thomomys* p. 12 pl. iv ff. 4–6, *apachinus* New Mexico from *Cynomys* ? p. 14 pl. v ff. 1–3, *gibsoni* Ontario p. 15 pl. v ff. 4–5, **spp. n.**, FOX U. S. Hyg. Lab. Bull. No. **97.**

Ctenocephalus canis, ROTHSCHILD Rep. B. O. U. exp. **2** No. 12.

Doratopsylla blarinae **sp. n.** Columbia p. 11 pl. iv ff. 1–3, FOX U. S. Hyg. Lab. Bull. No. **97.**

Ischnopsyllus texanus **sp. n.** Texas from *Nyctinomus* p. 16 pl. v ff. 6–8, FOX T.c.

Rhopalopsyllus gwyni **sp. n.** South America ? p. 10 pl. iii ff. 1–6, FOX T.c.

Rooseveltiella **gen. n.**, *georychi* **sp. n.** West Africa p. 7 pl. i ff. 1–6, FOX T.c.

Xenopsylla procaviae **sp. n.** East Africa p. 8 pl. ii ff. 1–5, FOX T.c.—*X. aequisetosus*, sexes, figs., ROTHSCHILD p. 32 Ent. Mag. **53.**

HEMIPTERA.

Heteroptera.

A catalogue of Heteroptera, new for the Danish fauna, observed since the year 1912, JACOBSEN Flora og Fauna **1917** p. 54–57.

Bibliography of Otto Heidemann's works with portrait; P. ent. Soc. Washington **18** pp. 201–205 pl. xvi.

Mimetic Heteroptera in Mexico, HERRERA Bol. Est. Biol. Mexico **2** p. 90.

PENTATOMIDAE.

Agonoscelis vanderysti **sp. n.** Congo p. 307, SCHOUTEDEN Rev. zool. afric. **4** 1916.

Anoplogonius nigricollis var. n. *pseudaulicus*, SCHOUTEDEN p. 282 T.c.

Apateticus ludovicianus **sp. n.** U. S. p. 462, STONER Ent. News **28.**

Banya **gen. n.** p. 309 near *Menida*, *leplaei* **sp. n.** Congo p. 310, SCHOUTEDEN Rev. zool. afric. **4** 1916.

Basicryptus hutereaui **sp. n.** Congo p. 284, SCHOUTEDEN Rev. zool. afric **4** 1916, *B. pictus* **sp. n.** E. Africa p. 285, ID. T.c.

Bathycoelia christyi **sp. n.** Congo p. 308, SCHOUTEDEN T.c.

Benia **gen. n.** near *Mabusana* p. 301, *murtulai* **sp. n.** Congo p. 302, with var. *dispar* p. 303, SCHOUTEDEN T.c.

Calidea hutereauae **sp. n.** Congo p. 281, SCHOUTEDEN T.c.

Carbula nigricornis **sp. n.** Congo p. 304, with var. *obtusangula* p. 305, SCHOUTEDEN T.c.

Caura bayeri **sp. n.** Congo p. 301, *marginata* var. n. *vanheckei* p. 300, SCHOUTEDEN T.c.

Coenomorpha schioedtei var. n. *interruptevenosa* p. 313, SCHOUTEDEN T.c.

Crollius verschuereni **sp. n.** Congo p. 298, SCHOUTEDEN T.c.

Diploxys ituriensis **sp. n.** Congo p. 305, SCHOUTEDEN T.c.

Eipeliella; position, SCHOUTEDEN p. 308 T.c.

Elasmostethus griseus, parental care, JENSEN-HAARUP p. 187 Ent. Mitt. **6** and København, Flora og Fauna **1916** 124–126.—*Clinocoris griseus*, parental care, SCHUHMACHER p. 243–249 Ent. Mitt. **6.**

Elizabetha **gen. n.** p. 278 *Tessaratomini*, *courteauxi* **sp. n.** Congo p. 279, SCHOUTEDEN Rev. zool. afric. **4** 1916.

Ennuis frater **sp. n.** Congo p. 311, SCHOUTEDEN T.c.

Euryaspis burgeoni **sp. n.** Congo p. 311, SCHOUTEDEN T.c.

Geomorpha lujai **sp. n.** Congo p. 306, SCHOUTEDEN T.c.

Halydicoris bayeri **sp. n.** Congo p. 300, SCHOUTEDEN T.c.

Hymenomaga perplexa **sp. n.** Congo with var. *scutellata*, SCHOUTEDEN p. 299 T.c.

Mabusana ituriensis **sp. n.** Congo p. 303, SCHOUTEDEN T.c.

Menida maynei **sp. n.** Congo p. 308, SCHOUTEDEN T.c.

Patanocnema maynei **sp. n.** Congo p. 283, SCHOUTEDEN T.c.

Piezodorus lituratus life-history, BUTLER pp. 34–38 Ent. Mo. Mag. **53.**

Platynopus dispar **sp. n.** Congo p. 280, SCHOUTEDEN Rev. zool. afric. **4** 1916.

Scribonia lujai **sp. n.** Congo p. 312, SCHOUTEDEN T.c.

Stenozygum varelai var. n. *capitata* p. 307, SCHOUTEDEN T.c.

Thoria zuwanica **sp. n.** E. Africa p. 286, SCHOUTEDEN T.c.

COREIDAE.

Anasa andresii life history and habits, JONES J. Econ. Ent. **9** 1916 pp. 431–434.

Daladeropsis hutereauae **sp. n.** Congo p. 165, SCHOUTEDEN Rev. zool. afric. **5.**

Dilycoctha brouni **sp. n.** Congo p. 163, SCHOUTEDEN Rev. zool. afric. **5.**

Harmostes monograph p. 439–450, *croceus* **sp. n.** California p. 445, GIBSON Ent. News **28.**

Leptoglossus key to North-american, GIBSON pp. 69–73 Psyche **24.**

Pendulinus devastans, *nigromarginatus* **spp. n.**, Africa p. 118, DISTANT Bull. ent. Res. **8.**

LYGAEIDAE OR MYODOCHIDAE.

The genera of the United States, BARBER Psyche **24** pp. 128–135.

Geocoris arenarius var. n. *lautus* p. 44, *collaris* var. n. *vestitus* p. 47, *acuticeps* var. n. *falsatus* p. 50, MONTANDON Bull. Soc. ent. Egypt **9** 1916.

Neoblissus parasitaster, BRUCH p. 147 Physis **3.**

Scolopostethus of New York, TORRE BUENO pp. 65–68 Ent. News **28.**

PYRRHOCORIDAE.

Dysdercus delauneyi, SANDS West Ind. Bull. **16** pp. 235–255.

TINGITIDAE.

Acalypta grisea **sp. n.** U. S. p. 218 pl. xvii f. 2, HEIDEMANN P. ent. Soc. Washington **18.**—*A. cooleyi* **sp. n.** Montana p. 213, DRAKE Ohio Nat. **17.**

Alveotingis minor, brevicornis, **spp. n.,** Iowa p. 305 figs. p. 306, OSBORN & DRAKE Ohio J. Sci. **17.**

Atheas annulatus p. 295, *sordidus* p. 296, **spp. n.,** U. S., OSBORN & DRAKE T.c.

Canthacader tenuipes var. n. *infuscata* p. 290, SCHOUTEDEN Rev. zool. afric. **4** 1916.

Cochlochila bequaerti **sp. n.** Africa p. 294, SCHOUTEDEN T.c.

Corythaica constricta **sp. n.** Colorado p. 304, OSBORN & DRAKE Ohio J. Sci. **17.**

Corythucha maculata p. 257, *bullata* p. 258, **spp. n.,** California, VAN DUZEE Pr. Calif. Ac. **7.**—*C. padi* **sp. n.** Montana p. 215, DRAKE Ohio Nat. **17.**—*C. salicis, morrilli* p. 298, *coryli* p. 299, *hoodiana, eriodictyonae* p. 320, **spp. n.,** U. S., *distincta* var. n. *spinata* p. 301 fig., OSBORN & DRAKE Ohio J. Sci. **17.**—*C. pura* **sp. n.** U. S. p. 258, GIBSON Ent. News **28.**

Cysteochila biseriata p. 295, *maynei* p. 296, **spp. n.,** Congo, SCHOUTEDEN Rev. zool. afric. **4** 1916.

Dolichocysta acuta **sp. n.** Montana p. 214, DRAKE Ohio Nat. **17.**

Fenestrella ovata p. 155 pl. x f. d, OSBORN & DRAKE Psyche **24.**

Gargaphia albescens **sp. n.** California p. 228, DRAKE Ent. News **28.**

Hesperotingis **gen. n.** near *Melanorhopala, antennata,* p. 21, *fuscata* p. 24, **spp. n.,** U. S., PARSHLEY Psyche **24.**

Leptobyrsa rhododendri, natural history, DICKERSON pp. 105–112 pl. viii J. N. York ent. Soc. **25.**

Leptoypha distinguenda **sp. n.** Washington p. 218 pl. xvii f. 1, HEIDEMANN P. ent. Soc. Washington **18.**—*L. costata* **sp. n.** Am. bor. p. 16, PARSHLEY Psyche **24.**

Melanorophola notes pp. 159 & 60 figs. pl. x, OSBORN & DRAKE Psyche **24.**—*M. infuscata* **sp. n.** Virginia p. 19, PARSHLEY Psyche **24.**

Phatnoma maynei **sp. n.** Congo p. 289, SCHOUTEDEN Rev. zool. afric. **4** 1916.

Phyllontocheila laplumei p. 271, *teilinii* p. 273, *elizabethae* p. 274, *alberti* p. 275, **spp. n.,** Africa, *mayri* var. n. *obscura* p. 276, SCHOUTEDEN T.c.

Physatocheila parshleyi p. 156, *major* p. 158, **spp. n.,** U. S., OSBORN & DRAKE Psyche **24.**—*P. ornata* **sp. n.** San Diego p. 259, VAN DUZEE P. Calif. Ac. **7.**

Piesma marginepicta **sp. n.** Congo p. 289, SCHOUTEDEN Rev. zool. afric. **4** 1916.

Sankisia **gen. n.** p. 293 near *Habrochila, pulchra* **sp. n.** Africa p. 294, SCHOUTEDEN T.c.

Serenthia maynei **sp. n.** Congo p. 291, SCHOUTEDEN T.c.

Stephanitis pyrioides, stages, DICKERSON & WEISS pp. 101–105 pl. ix Ent. News **28.**

PHYMATIDAE.

Carcinochelis lappacea **sp. n.** Philippines p. 282, BERGROTH Bull. Soc. ent. France **1917.**

Eurymnus **n. n.** for *Botha* Dist., BERGROTH p. 284 Bull. Soc. ent. France **1917.**

ARADIDAE.

Aradus depictus **sp. n.** California p. 253 253, VAN DUZEE Pr. Calif. Ac. **7.**

HYDROMETRIDAE OR GERRIDEA.

Gerris remigis, life-history, TORRE BUENO Ent. News 28 pp. 201–208.—*G. marginatus,* life-history, TORRE BUENO pp. 295–301 T.c.

Mesovelia mulsanti, life-history, HUNGERFORD Psyche **24** pp. 73–84 pl. iv.

Microvelia borealis, life-history, TORRE BUENO pp. 354–359 pl. xxv Ent. News **28.**

HEBRIDAE.

Merragata foveata p. 103, *brunnea* p. 105, **spp. n.** U. S., DRAKE Ohio J. Sci. **17.**

REDUVIIDAE.

Acanthaspis angalia, gracilipes, A. (*Leptacanthaspis* subg. n.) *orientalis,* p. 51, *decorsei, felixi,* p. 52, **spp. n.** Africa, JEANNEL Bull. Soc. ent. France **1917.**

Androclus (*Dichraotropis*) *seyidiensis* **sp. n.** Africa, JEANNEL p. 303 Bull. Soc. ent. France **1916.**

Cethera kenyensis **sp. n.** p. 49, JEANNEL Bull. Soc. ent. France **1917.**

Cetheromma **gen. n.**, *telescopus* **sp. n.** Tanganyika, JEANNEL p. 50 T.c.

Ectomocoris inbaya, myrmecoides, **spp. n.** Africa p. 303, JEANNEL Bull. Soc. ent. France **1916.**

Eriopreda **gen. n.** near *Varus, feai* **sp. n.** Africa, JEANNEL p. 50 Bull. Soc. ent. France **1917.**

Haematochares stricticollis **sp. n.** Africa p. 302, JEANNEL Bull. Soc. ent. France **1916.**

Harpactor (*Hypertolmus*) *alluaudi, H.* (*Diphymus*) *seyidiensis, bayoni, kavirondo, H.* (*Harpiscus*) *tavetanus,* p. 301, *H.* (*Rhinocoris*) *castanescens* p. 302, **spp. n.** Africa, JEANNEL T.c.

Leptacanthaspis **subg. n.** vide *Acanthaspis.*

Mardania transversalis **sp. n.** Africa p. 52, JEANNEL Bull. Soc. ent. France **1917.**

Margasus kilimanus, haemorrhoidalis, **spp. n.** Africa p. 302, JEANNEL Bull. Soc. ent. France **1916.**

Microvarus **gen. n.** p. 50 near *Varus, conradti* **sp. n.** Africa p. 51, JEANNEL Bull. Soc. ent. France **1917.**

Pachysandalus **gen. n.** near *Lestomerus, collaris, orientalis,* **spp. n.** Africa, JEANNEL p. 304 Bull. Soc. ent. France **1916.**

Paramphibolus zanzibaricus **sp. n.** p. 300, JEANNEL T.c.

Phonoctonus poultoni **sp. n.** Congo p. 258, SCHOUTEDEN Rev. zool. afric. **4** 1916.

Pirates (*Cleptocoris*) *ochripennis* **sp. n.** Africa p. 303, JEANNEL Bull. Soc. ent. France **1916.**

Platymeris rufipes, charon, kavirondo, **spp. n.** Africa p. 53, JEANNEL Bull. Soc. ent. France **1917.**

Recicolus **gen. n.** near *Cerilocus, lepturoides* **sp. n.** Africa, JEANNEL p. 52 T.c.

ANTHOCORIDAE.

Macrotracheliella nigra **sp. n.** Massachusetts, PARSHLEY p. 38 Ent. News **28.**

ENICOCEPHALIDAE.

†*Disphaerocephalus* **gen. n.** *Enicocephalidae, constrictus* **sp. n.** burmese amber, p. 361 fig., COCKERELL Amer. J. Sci. **44.**

†*Enicocephalus swinhoei* **sp. n.** burmese amber p. 364, COCKERELL T.c.

CAPSIDAE, MIRIDAE.

European Miridae in North America, KNIGHT Canad. Ent. **49** pp. 248–251.

Adelphocoris superbus var. n. *borealis* p. 263, VAN DUZEE P. Calif. Ac. **7.**

Calocoris angustatus, BALLARD Bull. Agric. Inst. Pusa **58** 6 pp. 1 pl.—*C. alpestris,* food-plant, DAY p. 183 Ent. Mo. Mag. **53.**

Camptobrochis fenestratus **sp. n.** California p. 266, VAN DUZEE P. Calif. Ac. **7.**

Coratocapsus fusiformis **sp. n.** Sonoma p. 270, VAN DUZEE T.c.

Clivinema regalis **sp. n.** Texas p. 5, KNIGHT Ent. News **28.**

Collaria oleosa pl. v f. 6 p. 381, DISTANT Bull. ent. Res. **7.**

Dicyphus rufuscens p. 268, *elongatus* p. 269, **spp. n.** California, VAN DUZEE P. Calif. Ac. **7.**—*D. prasinus, luridus,* **spp. n.** Porto Rico p. 218, GIBSON Canad. Ent. **49.**

Excentricus californicus **sp. n.** p. 284, VAN DUZEE P. Calif. Ac. **7.**

Heterocordylus malinus and *Lygidea mendax,* foods, CUSHMAN p. 196 P. ent. Soc. Washington **18.**

Largidea davisi **sp. n.** New York p. 7, KNIGHT Ent. News **28.**

Lopidea heidemanni p. 456, *salicis* p. 457, *davisi* p. 458, *reuteri* p. 459, *staphyleae* p. 460 with var. *sanguinea,* **spp. n.** U. S., KNIGHT T.c.—*L. aculeata,* p. 271, *ampla* p. 272, **spp. n.** California, VAN DUZEE P. Calif. Ac. **7.**

Lygus communis novascotiensis, BRITTAIN Bull. Dep. Agric. Nova Scotia **8**, 56 pp. 10 pls.

Macrotylus intermedius **sp. n.** California p. 278, VAN DUZEE P. Calif. Ac. **7**.

Mecomma antennata **sp. n.** California p. 275, VAN DUZEE T.c.

Monalonion illustris pl. v f. 2, *collaris* f. 5, **spp. n.** Colombia p. 382, DISTANT Bull. ent. Res. **7**.

Neobothynotus **gen. n.** p. 33, *modestus* **sp. n.** Philadelphia p. 34, WIRTNER Ent. News **28**.

Paracalocoris hawleyi, life-history, HAWLEY pp. 545–552 figs. J. econ. Ent. **10**.

Paraproba cincta p. 273, *nigrinervis* p. 274, **spp. n.** California, VAN DUZEE P. Calif. Ac. **7**.

Parthenicus ruber p. 276, *giffardi* p. 277, **spp. n.** California, VAN DUZEE T.c.

Phytocoris vinaceus **sp. n.** California p. 263, VAN DUZEE T.c.

Plagiognathus mundus p. 281, *lineatus* p. 282, *diversus* with varr. *cruralis* p. 283 and var. *pluto* p. 284, **spp. n.**, California, VAN DUZEE T.c.

Psallus pantherinus p. 279, *soror* p. 280, **spp. n.** California, VAN DUZEE T.c.

Reuteroscopus falcatus **sp. n.** California p. 278, VAN DUZEE T.c.

Sericophanes ocellatus, p. 3 *noctuans* **sp. n.** New York p. 4, KNIGHT Ent. News **28**.

Tenthecoris bicolor, WEISS p. 24 pl. iv. f. 3 Ent. News **28**.

HYDROCORISAE.

Food, HUNGERFORD p. 336 Science **45**.

Food of Corixidae, HUNGERFORD J. N. York ent. Soc. **25** pp. 1–5 pl. i.

Aphelocheirus schoutedeni **sp. n.** Congo p. 117, MONTANDON Rev. Zool. afric. **4** 1914.—*A. aestivalis*, BUTLER p. 279 Ent. Mo. Mag. **53**.—*A. montandoni*, BUTLER p. 180 Ent. Mo. Mag. **53**.—*A. aestivalis* and *montandoni* one species, BERGROTH p. 252 Ent. Mo. Mag. **53**.

Artocorixa; stages etc., HUNGERFORD pp. 112–122 J. N. York ent. Soc. **25**.—*A. interrupta*, variation, ABBOTT Washington Univ. Stud. **1** 1913 pp. 10–21 pl. iii.

Buenoa margaritacea, oviposition, early stages, HUNGERFORD pp. 174–182 pl. xiii. Ent. News **28**.

Notonecta undulata, habits, life-history, HUNGERFORD pp. 267–277 pls. xix & xx. T.c.

Sphaerodema stappersi **sp. n.** Congo p. 119, MONTANDON Rev. Zool. afric. **4** 1914.

Homoptera.

CICADIDAE.

Calcagninus salvazanus **sp. n.** Tonkin p. 103, DISTANT Ann. Nat. Hist. **19**.

Cicadatra foveicollis, INNES p. 141 Bull. Soc. ent. Egypte **6**.

Cicadella [? *Cicadetta*] *sachaliensis* **sp. n.**, MATSUMURA Trans. Sapporo Nat. Hist. Soc. **6** pp. 186–212 with 3 pls.

Clidophleps astigma **sp. n.** Lower California p. 7 figs., DAVIS J. N. York ent. Soc. **25**.

Cosmopsaltria sumatrana **sp. n.** p. 2, MOULTON Entomol. **50**.—*C. divergens* **sp. n.** Laos, DISTANT p. 321 Ann. Nat. hist. **20**.—*Cosmosaltria multivocalis* **sp. n.**, MATSUMURA Trans. Sapporo Nat. Hist. Soc. **6** pp. 186–212 with 3 pls.

Cryptotympana mimica p. 319, *vitaiisi* p. 320, **spp. n.** Laos, DISTANT Ann. Nat. hist. **20**.

Dundubia longina **sp. n.** Tonkin p. 320, DISTANT T.c.

Enterponosia **n. gen.**, *hoppo*, *viridifrons*, *chibensis*, **spp. n.**, MATSUMURA Trans. Sapporo Nat. Hist. Soc. **6** pp. 186–212, 3 pls.

Formosenia **gen. n.**, MATSUMURA pp. 186–212 T.c.

Gaeana laosensis **sp. n.** p. 324, *vestita* var. p. 325, DISTANT Ann. Nat. hist. **20**.

Haphsa conformis p. 322, *fratercula*, *opercularis*, p. 323, **spp. n.** Tonkin, DISTANT T.c.

Huechys tonkinensis **sp. n.** p. 104, DISTANT Ann. Nat. Hist. **19**.

Hymenogaster planiceps **sp. n.** Cairo p. 7, HORVATH Bull. Soc. ent. Egypte **7**, 1916.

Leptosemia **gen. n.**, MATSUMURA Trans. Sapporo Nat. Hist. Soc. **6** pp. 186–212 with 3 pls.

Mzimuna gakokizana, goshizana, kuroiwae, **spp. n.**, MATSUMURA **6** pp. 186–212 T.c.

Mogannia indigotea **sp. n.** Tonkin p. 103, DISTANT Ann. Nat. hist. **19.**

Mogannia rubricosta, pallipes, formosana, **spp. n.**, MATSUMURA Trans. Sapporo Nat. Hist. Soc. **6** pp. 186–212.

Okanagana aurantiaca **sp. n.** Lower California p. 9 figs., DAVIS J. N. York ent. Soc. **25.**—*O. pallidula* **sp. n.** California p. 23, f. 8, DAVIS T.c.

Platypleura yayeyamana, kuroiwae, **spp. n.**, MATSUMURA Trans. Sapporo Nat. Hist. Soc. **6** pp. 186–212.

Puranoides **gen. n.**, *klossi* **sp. n.** Sumatra, MOULTON p. 1 Entomol. **50.**

Pycna miyakona **sp. n.**, MATSUMURA Trans. Sapporo Nat. Hist. Soc. **6.** pp. 186–212.

Scieroptera delineata **sp. n.** Laos p. 325, DISTANT Ann. Nat. hist. **20.**

Taiwanosemia **gen. n.**, MATSUMURA Trans. Sapporo Nat. Hist. Soc. **6** p. 186–212.

Terpnosia rustica p. 101, *chapana, mesonotalis*, p. 102, **spp. n.** Tonkin, DISTANT Ann. Nat. Hist. **19.**—*T. majuscula* **sp. n.** Laos p. 323, *T. mesonotalis* = (*Calcagninus salvazanus*) p. 324, DISTANT Ann. Nat. hist. **20.**

Tibicen inauditus p. 204, *duryi* p. 206, *knighti* p. 208, **spp. n.** U.S., *viridifascia* var. n. *bequaerti* p. 210 figs., DAVIS J. N. York ent. Soc. **25.**

Yezoterpnosia **gen. n.**, MATSUMURA Trans. Sapporo Nat. Hist. Soc. **6** p. 186–212.

FULGORIDAE.

Hawaiian Delphacidae and their food plants, GIFFARD pp. 339–348 P. Hawai ent. Soc. **3.**

The Derbidae of the Philippines, MUIR Philipp. J. Sci. D **12** pp. 49–104 **1** pl. This includes various changes of generic position not stated below.

Adolendana **gen. n.** *Cixiinae* p. 278, *typica* **sp. n.** Seychelles p. 279 pl. xlix f. 10, DISTANT Tr. Linn. Soc. **17.**

Ambarvalia **gen. n.** *Delphacinae, pyrops* **sp. n.** Seychelles pl. li f. **1**, DISTANT p. 306 T.c.

Amphiscepa bivittata, egg and stages, SCAMMELL J. econ. ent. **10** pp. 552–556 pl. xx.

Anectropia atrata **sp. n.** Luzon p. 326, MUIR P. Hawai. ent. Soc. **3.**

Aphelonema giffardi **sp. n.** California p. 309, VAN DUZEE P. Calif. Ac. **7.**

Aquaelicium **gen. n.** Derbinae, *typicum* pl. xlix f. 11, *elegantulum* pl. li f. 9 p. 289, *brunnescens* p. 290 f. 7, **spp. n.**, DISTANT Tr. Linn. Soc. **17.**

Armilustrium **gen. n.** *Ricaniinae* p. 295, *gardineri* pl. 1 f. 3, *scotti* f. 4, **spp. n.** Seychelles p. 296, DISTANT T.c.

Aselgeoides **gen. n.** *Dictyophorinae* p. 275, *insularis* **sp. n.** Seychelles p. 276, pl. xlix f. 1, DISTANT T.c.

Banksiella **gen. n.** near *Robigus, pulchra* **sp. n.** Mindanao, MUIR p. 76 Philipp. J. Sci. D **12.**

Brixia mahensis, stellata, **spp. n.** Seychelles p. 284, DISTANT Tr. Linn. Soc. **17.**

Caneirona maculipennis **sp. n.** Seychelles p. 277 pl. xlix f. 9, DISTANT T.c.

Carmentalia **gen. n.** *Ricaniinae, biformis* **sp. n.** Seychelles pl. 1 f. 5, DISTANT p. 296 T.c.

Catonia clara, albicosta, **spp. n.** California p. 306, VAN DUZEE P. Calif. Ac. **7.**

Chloriona danica **sp. n.** p. 4 fig. 3, JENSEN–HAARUP Ent. Medd. **11.**

Clusivius **gen. n.** *Cixiinae, spectabilis* **sp. n.** Seychelles pl. xlix f. 15, DISTANT p. 277 Tr. Linn. Soc. **17.**

Consualia **gen. n.** *Delphacinae, robusta* **sp. n.** Seychelles pl. 1 f. 6, DISTANT p. 304 T.c.

Curiatius **gen. n.** near *Brixia, insignis* **sp. n.** Seychelles pl. xlix f. 12 p. 285, DISTANT T.c.

Daradaxoides **gen. n.**, *mahensis*, **sp. n.** pl. xlix f. 5, DISTANT p. 286 T.c.

Dardus erebus **sp. n.** Queensland p. 187, DISTANT Ann. Nat. hist. **20.**

Deferundata **gen. n.** *Ricaniinae, aldabrana* **sp. n.** pl. l f. 1, DISTANT p. 295 Tr. Linn. Soc. **17.**

Delphacodes, validity p. 332, *meridionalis* N. Zealand, *terryi* Java p. 334, *neopropinqua* p. 335, *bakeri* p. 336, Philippines, *lacteipennis* Fiji p. 337, *nigripennis* Formosa p. 338, **spp. n.**, MUIR P. Hawaii ent. Soc. **3.**

Delphax pylaon, to *Pissonotus*, MUIR p. 325 T.c.

Dicranotropis cognata Queensland p. 317, *fuscicaudata, cervina*, p. 318, Philippines, **spp. n.**, MUIR T.c.

Dictyophorodelphax mirabilis, BRIDWELL p. 279 P. Hawaii ent. Soc. **3.**

Distantinia **gen. n.** near *Leomelicharia, nigrocacuminis* **sp. n.** Luzon, MUIR p. 102 Philipp. J. Sci. D **12.**

Eosaccharissa philippina, pulchra, fusca, **spp. n.** Philippines, MUIR p. 71 T.c.

Equirria **gen. n.** *Derbinae, phalaena* **sp. n.** Seychelles pl. li f. 6, DISTANT p. 290 Tr. Linn. Soc. **17.** Hondon

Fescennia bimaculata pl. li f. 11, *aurea* f. 10, **spp. n.** Seychelles p. 288, DISTANT T.c.

Flatoides protea **sp. n.** Seychelles p. 300 pl. l f. 9, DISTANT T.c.

Fordicidia **gen. n.** *Derbinae* p. 290, *robusta* **sp. n.** Seychelles p. 291 pl. li f. 15, DISTANT T.c.

Herpis flavescens, philippina, p. 59, *pallidinervis* p. 60, **spp. n.** Philippines, MUIR Philipp. J. Sci. D **12.**

Hilda welwitschi **sp. n.** Angola p. 186, DISTANT Ann. Nat. hist. **20.**

Hysteropterum paludum **sp. n.** Algeria p. 338 figs., BERGEVIN Bull. Soc. ent. France **1917** 1918.—*H. issifrons* **sp. n.** Algeria p. 374, BERGEVIN T.c.

Iguvium **gen. n.** *Derbinae* near *Pamendanga, albomaculatum* **sp. n.** Seychelles pl. li f. 5, DISTANT p. 287 Tr. Linn. Soc. **17.**

Kaha flava p. 68, *pseudomedia* p. 69, *angulata* p. 70, **spp. n.** Philippines, MUIR Philipp. J. Sci. D **12.**

Kamendaka mindanensis p. 72, *luzonensis, tayabasensis, maquilingensis, flava*, p. 73, *incommoda* p. 74, Philippines, **spp. n.**, MUIR T.c.

Kelisia emoloa **sp. n.** Oahu p. 311 pl. v. f. 19, MUIR P. Hawai. ent. Soc. **3.**—*K. kirkaldyi* Fiji p. 329, *fieberi* Luzon p. 331, **spp. n.**, MUIR T.c.

Ketumala rubromarginata **sp. n.** Seychelles p. 299 pl. l f. 2, DISTANT Tr. Linn. Soc. **17.**

Lamenia albicosta, bakeri, p. 61, *philippina* p. 62, *pallidinervis* p. 63, **spp. n.** Philippines, MUIR Philipp. J. Sci. D **12.**

Leialoha lehuae lanaiensis subsp. n. p. 299 f. 1, MUIR P. Hawai. ent. Soc. **3.**

Leomelicharia nigrovittata p. 99, *delicata* p. 100, *delicatissima, pulchra*, p. 101, **spp. n.** Philippines, MUIR Philipp. J. Sci. D **12.**

Leptaleocera nigrofasciata, banksi, **spp. n.** Philippines p. 77, MUIR T.c.

Levu irrorata **sp. n.** Mindanoa p. 103, MUIR T.c.

Liburnia muiri p. 314, *semicinctus* p. 315, *flavialis* p. 317, **spp. n.** California, VAN DUZEE P. Calif. Ac. **7.**

†*Liburnia burmitina* **sp. n.** burmese amber p. 329, COCKERELL Ann. Amer. ent. Soc. **10.**

Lollius atromaculatus pl. l. f. 7, *virescens* f. 8, **spp. n.** Seychelles, DISTANT p. 294 Tr. Linn. Soc. **17.**

Losbanyosia **gen. n.** near *Diostrombus* p. 85, *bakeri* **sp. n.** Luzon p. 86, MUIR Philipp. J. Sci. D **12.**

Matutinus **gen. n.** *Cixiinae, opulentus* **sp. n.** Seychelles pl. xlix. fig. 16, DISTANT p. 278 Tr. Linn. Soc. **17.**

Megamelus proserpinoides, albicollis, **spp. n.** Philippines p. 327, MUIR P. Hawai. ent. Soc. **3.**

Megatropis sanguinea **sp. n.** Mindanao p. 75, MUIR Philipp. J. Sci. D **12.**

Mindana **gen. n.** *Derbinae, latifrons* **sp. n.** Philippines, MUIR p. 94 T.c.

Monochorhynchus **gen. n.** near *Paraproutista* p. 217, *wahri* **sp. n.** Borneo p. 218, MUIR T.c.

Muiria iridescens **sp. n.** Luzon p. 99, MUIR T.c.

Mysidioides tagalica **sp. n.** Luzon p. 78, MUIR T.c.

Naethus maculatus var. n. *fasciatus* p. 310, VAN DUZEE P. Calif. Ac. **7.**

Neocyclokara **gen. n.** *flava* **sp. n.** Mindanao, MUIR p. 57 figs. Philipp. J. Sci. D **12.**

Neodendrokara **gen. n.**, *crescentiformis* **sp. n.** Philipines, MUIR p. 66 T.c.

Neolamenia **gen. n.** p. 63, *flava* **sp. n.** Philippines p. 64, MUIR T.c.

Neoprivesa **gen. n.** *Ricaniinae, fuscovaria* **sp. n.** Seychelles pl. xlix f. 8, DISTANT p. 297 Tr. Linn. Soc. **17.**

Nesodryas antidesmae p. 300 f. 2 Oahu, *N.* (*Nesothoe*) *munroi* Lanai p. 303 f.6, **spp. n.**, MUIR P. Hawai. ent. Soc. **3.**

Nesokaha rubrinervis, nigropuncta, **spp. n.** Luzon, MUIR p. 67 Philipp. J. Sci. D **12.**

Nesosydne timberlakei p. 304 pl. v. f. 14, *gunnerae* f. 15, *nesogunnerae* f. 16, p. 305, *disjuncta* p. 306 f. 12, *asteliae* f. 13, *sola* f. 11, p. 307, *koebelei* f. 10, *nigriceps* pl. vi f. 33, p. 308, *hamata* p. 309 pl. v f. 17, **spp. n.** Hawaiia, *fullawayi lanaiensis* subsp. n. p. 309, MUIR P. Hawai. ent. Soc. **3.**

Nicerta palawanensis **sp. n.** p. 74, MUIR Philipp. J. Sci. D. **12.**

Nilaparvata mahensis **sp. n.** p. 304 pl. li f. 14, DISTANT Tr. Linn. Soc. **17.**

Nisia sulphurata, maculosa pl. li f. 4, *fuscofasciata* f. 3, p. 292, *thoracica* p. 293, **spp. n.** Seychelles, DISTANT T.c.

Nothorestias **gen. n.** near *Nesorestias, badia* **sp. n.** Oahu pl. v f. 9, MUIR p. 304 P. Hawai. ent. Soc. **3.**

Oliarus hesperius p. 307, *exoptatus* p. 308, **spp. n.** California VAN DUZEE P. Calif. Ac. **7.**

Opiconsiva **gen. n.** near *Pundaluoya, fuscovaria* pl. l f. 10, *colorata* f. 11, p. 301, *balteata* pl. li f. 8, *gloriosa*, p. 302, *insularis* pl. l f. 12, *derelicta* f. 13, *modesta* f. 14, p. 302, **spp. n.** Seychelles, DISTANT Tr. Linn. Soc. **17.**

Parakosalya **gen. n.** p. 286 *Achilinae, insularis* **sp. n.** Seychelles, p. 287 fig., DISTANT T.c.

Paraliburnia **gen. n.** p. 1, *jacobseni* **sp. n.** Denmark p. 2, JENSEN-HAARUP Ent. Meddel **11.**

Paraproutista trifasciata, luzonensis, p. 96, *platypes, fuscipennis,* p. 97, **spp. n.** Philippines, MUIR Philipp. J. Sci. D. **12.**

Peggia irrorata **sp. n.** Luzon p. 87 fig., MUIR T.c.

Peggiopsis dorsimaculata p. 89, *pallida, pseudojavana,* p. 90, *pseudopuncticosta* p. 91, *pseudoflavicornis* p. 92, *staeli* p. 93, **spp. n.** Philippines, MUIR T.c.

Peregrinus maidis, synonymy, MUIR p. 147 Canad. Ent. **49**; economy, THOMAS Agric. Exp. Sta. South Carolina Bull. No. **174** 1914 p. 1–7 8 ff.

Perkinsiella manilae **sp. n.** p. 324, MUIR P. Hawai. ent. Soc. **3.**

Phaciocephala badia, pseudobadia, **spp. n.** Philippines p. 58, MUIR Philipp. J. Sci. D. **12.**

Phantasmatocera fuscofasciata **sp. n.** Luzon p. 65, MUIR T.c.

Phyllodinus nigromaculosus Philippines, *sauteri,* p. 319, *punctata* p. 320, Formosa, **spp. n.**, MUIR P. Hawai. ent. Soc. **3.**

Pissonotus delicatus var. n. *melanurus* p. 311, VAN DUZEE P. Calif. Ac. **7.**

Privesa fryeri pl. xlix f. 7 p. 297, *metanaria* f. 6 p. 297, **spp. n.** Seychelles, DISTANT Tr. Linn. Soc. **17.**—*P. pronotalis* **sp. n.** Australia p. 187, DISTANT Ann. Nat. hist. **20.**

Privesana **gen. n.** for *Privesa infusca* Dist., DISTANT p. 298 Tr. Linn. Soc. **17.**

Proutista nigritarsis **sp. n.** Philippines p. 95, MUIR Philipp. J. Sci. D **12.**

Pterodictya ephemera, CHAMPION p. 86 Ent. Mo. Mag. **53.**

Pyrilla aberrans and allies, natural history, MISRA Mem. Dep. Agric. India Ent. **5** pp. 73–136 pls. and figs.

Pyrrhoneura maculata **sp. n.** Luzon, MUIR p. 64 Philipp. J. Sci. D **12.**

Rileyopsis **gen. n.** *Issidae* p. 309, *peyerimhoffi* **sp. n.** Algeria p. 310, figs., BERGEVIN Bull. Soc. ent. France **1917.**

Sardia brunnia **sp. n.** Amboina p. 328, MUIR P. Hawai. ent. Soc. **3.**

Sikaiana vitriceps **sp. n.** Luzon p. 99, MUIR Phillipp. J. Sci. D **12.**

Smicrotatodelphax kirkaldyi **sp. n.** Java p. 320, MUIR P. Hawai. ent. Soc. **3.**

Stenocranus bakeri Luzon, *neopacificus* Amboina, p. 321, *nigrifrons* Formosa p. 322, *philippinensis* Luzon, *taiwanensis* Formosa p. 323, *luteus* Amboina p. 324, **spp. n.**, MUIR T.c.

Stobaera giffardi **sp. n.** California p. 313, VAN DUZEE P. Calif. Ac. **7.**

Tembandumba **gen. n.** near *Hilda* p. 186, *buarana* **sp. n.** Cameroons p. 187, DISTANT Ann. Nat. hist. **20.**

Trirhacus trichophorus **sp. n.** Macedonia p. 259, MELICHAR Wien. ent. Zeit. **33** 1914.

Ugyops facialis pl. xlix f. 2, *seychellensis* f. 4, **spp. n.** Seychelles, DISTANT p. 305 Tr. Linn. Soc. **17.**

Vekunta palawanensis **sp. n.** p. 60, MUIR Philipp. J. Sci. D **12.**

Vizcaya **gen. n.** near *Proterosydne*, *bakeri* **sp. n.** Philippines, MUIR p. 351 T.c.

Volcanalia **gen. n.** *Cixiinae*, *typica*, p. 279, *atrostriata*, *atroraria*, p. 280, *designata*, *cardui*, *picturata*, p. 281, *varicolor*, *fumosa*, p. 282, *modesta*, *uniformis*, *capitata*, p. 283, **spp. n.** Seychelles, DISTANT Tr. Linn. Soc. **17.**

Zeugma valdezi **sp. n.** Philippines (= *vittata* Mel.), MUIR p. 79 Philipp. J. Sci. D **12.**

Zoraida maculata p. 81, *lutescens* p. 82, *flaviventris* p. 83, *sinuosa*, *melichari*, p. 84, **spp. n.** Philippines, MUIR T.c.

MEMBRACIDAE.

Ophiderma fraterna, *compacta*, **spp. n.** U.S., GIBSON & WELLS p. 201 J. N. York Ent. Soc. **25.**

Platycotis maritimus **sp. n.** California p. 287, VAN DUZEE P. Calif. Ac. **7.**

CERCOPIDAE.

Wing-nervuration; METCALF pp. 27–32 2 pls. Ann. ent. Soc. Amer. **10.**

Tomaspis tristis, habits, WILLIAMS p. 271 Bull. ent. Res. **7.**

JASSIDAE.

Danish Jassidae, JENSEN-HAARUP Flora og Fauna **1917** pp. 41 etc. figs.

Aconura ragusai **sp. n.** Sicily p. 260, MELICHAR Wien. ent. Zeit **33** 1914.

Acropona gardineri pl. li f. 21, *sladeni* f. 19, **spp. n.** Seychelles p. 315, DISTANT Tr. Linn. Soc. **17.**

Acucephalus giffardi **sp. n.** California p. 293, VAN DUZEE P. Calif. Ac. **7.**

Agallia immaculata **sp. n.** Carolina p. 120, LATHROP Ohio J. Sci. **17.**

Athysanus frontalis **sp. n.** Seychelles, DISTANT p. 317 fig. Tr. Linn. Soc. **17.**

Balclutha chersonesia, *varicolor*, **spp. n.** Seychelles p. 318 figs., DISTANT T.c.

Chlorotettix borealis **sp. n.** U.S. p. 92 gs., SANDERS & DE LONG Ann. ent.d Soc. Amer. **10.**

Deltocephalus luteocephalus p. 84, *nigriventer* p. 85, *fumidus*, *concinnus*, p. 86, **spp. n.**, U.S. figs., SANDERS & DE LONG T.c.

Draeculacephala inscripta, ♂, OLSEN p. 215 pl. xiv. J.N. York ent. Soc. **25.**

Empoa aureotecta **sp. n.** Wisconsin p. 93 figs., SANDERS & DE LONG Ann. ent. Soc. Amer. **10.**

Empoasca sublactea p. 302, *transversa* p. 303, *ruficeps* p. 304, **spp. n.**, California, VAN DUZEE P. Calif. Ac. **7.**

Errhomenellus flavopunctatus **sp. n.** Moravia p. 260, MELICHAR Wien. ent. Zeit. **33** 1914.

Eurymeloides moruyana **sp. n.** Australia p. 188, DISTANT Ann. Nat. hist. **20.**

Euscelis ozarcensis **sp. n.** Missouri p. 184, GIBSON Canad. Ent. **49.**—*E. deceptus* **sp. n.** U.S. p. 87, SANDERS & DE LONG Ann. ent. Soc. Amer. **10.**

Gudwana **gen. n.** near *Ledropsis*, *typica* **sp. n.** Sydney, DISTANT p. 189 Ann. Nat. hist. **20.**

Hecalus parvipicta **sp. n.** Egypt p. 191, DISTANT T.c.

Idiocerus scotti **sp. n.** Seychelles p. 307 fig., DISTANT Tr. Linn. Soc. **17.**—*I. subnitens* **sp. n.** Wisconsin p. 82, SANDERS & DE LONG Ann. ent. Soc. Amer. **10.**—*I. amoenus* var. n. *pictus*

p. 289, VAN DUZEE P. Calif. Ac. **7.**—*I. fitchi*, life-history, BRITTAIN & SAUNDERS pp. 149–151 pl. ix Canad. Ent. **49.**—*I. scurra*, life-history, DICKERSON & WEISS p. 218 pl. xv J. N. York ent. Soc. **25.**

Jassus determinatus **sp. n.** Seychelles p. 316 pl. li f. 16, DISTANT Tr. Linn. Soc. **17.**

Kolla seychellensis, funeralis, **spp. n.,** Seychelles p. 312 figs., DISTANT T.c.

Kronos **gen. n.** p. 307 near *Bythoscopus, typicus* **sp. n.** Seychelles p. 308 fig., DISTANT T.c.

Ledropsis crocina p. 188, *acuminata* p. 189, **spp. n.,** Australia, DISTANT Ann. Nat. hist. **20.**

Limentinus **gen. n.** near *Jassus, aldabranus* **sp. n.** pl. li f. 12, DISTANT p. 316 Tr. Linn. Soc. **17.**

Maiestas **gen. n.** near *Kolla* p. 312, *illustris* **sp. n.** Seychelles p. 313, fig., DISTANT T.c.

Matsumurana **gen. n.** near *Dagama, facialis* **sp. n.** Seychelles, DISTANT p. 317 fig. T.c.

Memnonia simplex **sp. n.** California p. 294, VAN DUZEE P. Calif. Ac. **7.**

Nehela spectabilis pl. li f. 27, *elegantula* f. 24, p. 309, *conspicua* f. 26, *lineoligera, scutellata* f. 28, *flavolineata* f. 23, p. 310, *aterrima* p. 311 f. 22, **spp. n.,** Seychelles, DISTANT Tr. Linn. Soc. **17.**

Oncopsis californicus **sp. n.** p. 291, VAN DUZEE P. Calif. Ac. **7.**

Paganalia **gen. n.** near *Helochara, virescens* **sp. n.** Seychelles, DISTANT p. 314 fig., Tr. Linn. Soc. **17.**

Paralimnus silhouettensis **sp. n.** p. 320 fig., DISTANT T.c.

Phlepsius torridus p. 126 f. 4, *carolinus* p. 127 f. 5, *similis* p. 128 f. 6, *distinctus* p. 129 f. 7, **spp. n.,** U.S., LATHROP Ohio J. Sci. **17.**—*P. umbrosus* p. 88, *bifidus* p. 89, **spp. n.,** U.S., SANDERS and DE LONG Ann. ent. Soc. Amer. **10.**

Platymetopius parvus p. 122, *carolinus* p. 123, **spp. n.,** U.S., figs., LATHROP Ohio J. Sci. **17.**

Scaphoideus vagans, tessellatus, p. 319, *seychellensis* p. 320, figs., **spp. n.,** Seychelles, DISTANT Tr. Linn. Soc. **17.**

Tettigoniella nigrifrons Cameroons, *latomarginata,* p. 190, *richmondensis* p. 191, Australia, **spp. n.,** DISTANT Ann. Nat. hist. **20.**

Thamnotettix stramineus p. 90, *mellus, vittipennis,* p. 91, **spp. n.** U.S. SANDERS & DE LONG Ann. ent. Soc. Amer. **10.**—*T. commissus* p. 299, *helvinus* p. 300, **spp. n.,** California, *montanus* var. n. *reductus* p. 298, VAN DUZEE P. Calif. Ac. **7.**

Tinobregmus moodii **sp. n.** Missouri p. 183, GIBSON Canad. Ent. **49.**

Typhlocyba modesta **sp. n.** Missouri p. 184, GIBSON T.c.—*T. comes* and *C. coloradensis,* MERRILL Agric. Exp. Sta. New Mexico Bull. **94** 1915 pp. 1–33 pl. i ff. 1–8.

Ujna flavidipes **sp. n.** Seychelles p. 313 pl. li f. 20, DISTANT Tr. Linn. Soc. **17.**

PSYLLIDAE.

Psyllidae on *Acanthopanax aculeatum,* MUKOGAWA Coll. Essays Nawa pp. 59–61.

Arytaina variabilis p. 168, *tuberculata* p. 169, **spp. n.** Philippines, figs., CRAWFORD Philipp. J. Sci. D. **12.**

Auchmerina **gen. n.** near *Psylla, limbatipennis* **sp. n.** Bolivia, p. 347 figs., ENDERLEIN Zool. Anz. **49.**

Carsidaroida **gen. n.** p. 164, *heterocephala* **sp. n.** Luzon p. 165 fig., CRAWFORD Philipp. J. Sci. D. **12.**

Epipsylla forcipata **sp. n.** Palawan p. 167 fig., CRAWFORD T.c.

Heteropsylla crawfordi **sp. n.** Costa Rica p. 346 figs., ENDERLEIN Zool. Anz. **49.**

Homotama bilineata **sp. n.** Luzon p. 164, fig., CRAWFORD Philipp. J. Sci. D. **12.**

Labicria **gen. n.** near *Psylla* p. 348, *barbata* **sp. n.** Brazil p. 349 figs., ENDERLEIN Zool. Anz. **49.**

Panisopelma, valid, ENDERLEIN p. 351 T.c.

Paratrioza cockerelli p. 434 figs., ESSIG J. econ. Ent. **10.**

Pauropsylla brevicephala **sp. n.** Mindanao p. 163 fig., CRAWFORD Philipp. J. Sci. D. **12.**

Psylla colorada p. 170, *crenata* p. 171, **spp. n.** Philippines, figs., CRAWFORD T.c.—*P. fuscinodulus* **sp. n.** Bolivia p. 350 figs., ENDERLEIN Zool. Anz. **49.**

Rhinopsylla distincta **sp. n.** Luzon p. 166, CRAWFORD Philipp. J. Sci. D. **12.**

Strogylocephala **gen. n.** p. 166, *fascipennis* **sp. n.** p. 167 fig. Luzon, CRAWFORD T.c.

Syncoptozus **gen. n.** p. 344 *Aphalarinae, maculipennis* **sp. n.** Brazil p. 345 figs., ENDERLEIN Zool. Anz. **49.**

Trioza eugenioides p. 171, *divisa* p. 172, *luzonensis* p. 173, Philippines, *jambolanae* India p. 173, **spp. n.**, figs., CRAWFORD Philipp. J. Sci. D. **12.**—*T. limbata* **sp. n.** Bolivia p. 351 figs., ENDERLEIN Zool. Anz. **49.**—*T. alacris* p. 439 figs., ESSIG J. econ. Ent. **10.**

APHIDAE.

Ant Aphidae in Somerset, CRAWLEY Pr. Somerset Soc. **62** pp. 148–163.

Sensory structures; BAKER pp. 378–384, 2 pls. Canad. Ent. **49.**

Abura **gen. n.**, *memocola* **sp. n.** Japan, MATSUMURA J. Coll. Agric. Sapporo **7** pp. 351–414.

Acanthocallis **gen. n.**, *quercicola* **sp. n.** Japan, MATSUMURA pp. 351–414 T.c.

Aleurodaphis **gen. n.** p. 239, *flumeae* **sp. n.** Java p. 240, VAN DER GOOT Contrib. faune Ind. Néerl. **1**, Fasc. 3.

Amphrophora cicutae **sp. n.** California p. 51, SHINJI Canad. Ent. **49.**

Anuraphis **gen. n.** for part of *Aphis*, DEL GUERCIO p. 209 Redia **12**, *A. poae* Italy p. 231, *erratica* Sicily p. 232, **spp. n.** ID. t.c.—*A. persicae niger*, DEL GUERCIO p. 202 T.c.

Aphis citricola p. 235 pl. iii figs. 52–57 **sp. n.** Sicily, DEL GUERCIO T.c.—*A. isabellina* p. 211 pl. iii f. 9, *helianthi* p. 212 figs. 10 and 11, *beccarii* p. 214 figs. 12–14, *andreinii* p. 215 figs 15–21 **spp. n.** Africa, DEL GUERCIO T.c.—*A. eugeniae* p. 91, *malvoides* p. 96, *nigricans* p. 103, *nigricauda* p. 106, *tectonae* p. 111, **spp. n.** Java, VAN DER GOOT Contrib. faune Ind. Neerl. **1**, Fasc. 3.

Aphis acanthopanaci, astilbis, celastrii, colocasiae, clerodendri, glycines, kogomecola, odorikonis, polygonacea, yanagicola, **spp. n.** Japan, MATSUMURA J. Coll. Agric. Sapporo **7** pp. 351–414.—*A. viburniphila* p. 416 figs., *rumexicolens* p. 417 figs., **spp. n.**, U.S., PATCH J. econ. Ent. **10.**—*A. neomexicana* var. n. *pacifica* p. 290 figs., DAVIDSON J. econ. Ent. **10.**—*A. familiaris*, variability and synonymy, THEOBALD p. 77 Entomologist **50.**—*A. prunifoliae* Fitch, BAKER p. 410 Science **46.**

Arakawana **gen. n.**, *stigmata* **sp. n.** Japan, MATSUMURA J. Coll. Agric. Sapporo **7** pp. 351–414.

Arimakia **gen. n.**, *taranbonis, ararias*, **spp. n.**, Japan, MATSUMURA pp. 351–414 T.c.

Aspidaphis **gen. n.**, *polygoni* **sp. n.** Colorado, GILLETTE p. 196 figs. Canad. Ent. **49.**

Astegopteryx styraci **sp. n.**, MATSUMURA Essays Nawa pp. 39–94.

Aulacorthum dispersum p. 22, *filicis* p. 24, *scirpi* p. 26, *symplocois* p. 28, *viride* p. 31, **spp. n.**, Java, VAN DER GOOT Contrib. faune Ind. Néerl. **1** Fasc. 3.

Calaphis castaneoides p. 187, *alni* p. 188, **spp. n.**, U. S., BAKER P. ent. Soc. Washington **18.**

Callipterus trifolii synonymy p. 17, geographical distribution pp. 18, 19 f. 10, food plants p. 19, descriptions pp. 20–26 ff. 11–14, life history and habits pp. 26–39, natural enemies p. 39, bibliography p. 40, DAVIS U. S. Dept. Agric. Ent. Tech. Ser. No. **25** Pt. 2.

Cerataphis freycinetiae **sp. n.** Java, VAN DER GOOT Contrib. faune Ind. Néerl. **1** Fasc. 3 p. 166.—*C. saccharivora* **sp. n.**, MATSUMURA Essays Nawa pp. 39–94.

Ceratoglyphina **gen. n.** p. 235, *bambusae* **sp. n.** Java p. 237, VAN DER GOOT Contrib. faune Ind. Néerl. **1** Fasc. 3.

Cervaphis **gen. n.** p. 148, *Cervaphidina* trib. nov.; *schouteniae* **sp. n.** Java p. 149, VAN DER GOOT Contrib. faune Ind. Néerl. **1** Fasc. 3 p. 149.

Chaitophorus americanus **sp. n.** p. 428, BAKER J. econ. Ent. **10.**—*C. coleoptis* **sp. n.** San Francisco p. 86, SHINJI Psyche **24.**

Chalophorus salicicolus **sp. n.** Japan, MATSUMURA J. Coll. Agric. Sapporo **7** pp. 351–414.

Chermes & *Cnaphalodes* biology, STEVEN pp. 356–391 P. R. Soc. Edinburgh **37.**

Euceraphis lineata p. 426, *deducta* p. 427, **spp. n.**, U. S., BAKER J. econ. ent. **10.**

Francoa **gen. n.** near *Rhopalosiphum, elegans* sp. n. Europe, DEL GUERCIO pp. 197–201 pl. ii f. 1 Redia **12.**

Fushia **gen. n.** *Pemphiginae, rosea* **sp. n.**, MATSUMURA Essays Nawa pp. 39–94.

Glyphinaphis **gen. n.**, *bambusae* **sp. n.** Java, VAN DER GOOT Contrib. faune Ind. Néerl. **1** Fasc. 3 p. 232.

Gobaishia **gen. n.** Pemphiginae, *japonica, nirecola,* **spp. n.**, MATSUMURA Essays Nawa pp. 39–94.

Greenidea flacourtiae p. 136, *psidii* p. 138, **spp. n.**, Java, VAN DER GOOT Contrib. faune Ind. Néerl. **1** Fasc. 3.

Greenideoida **gen. n.** near *Greenidea, elongata* p. 142, *hannae* p. 145, **spp. n.** Java, VAN DER GOOT T.c.

Hannabura **gen. n.**, *alnicola* **sp. n.** Japan, MATSUMURA J. Coll. Agric. Sapporo **7** pp. 351–414.

Hayhurstia **gen. n.**, *deformans* **sp. n.** Colorado p. 206 pl. ii figs. 3–5, DEL GUERCIO Redia **12.**

Hyalopterus abietinus **sp. n.** Japan, MATSUMURA J. Coll. Agric. Sapporo **7** pp. 351–414.—*H. pruni,* WILLCOCKS Bull. Soc. ent. Egypte **9** 1916 pp. 33–37.

Lachnus himalayensis **sp. n.** p. 180 figs., VAN DER GOOT Rec. Ind. Mus. **13.**—*L. biotae* **sp. n.** Java, VAN DER GOOT Contrib. faune Ind. Néerl. **1** Fasc. **3** p. 161.—*L. laricicolus, longipennis,* **spp. n.**, Japan, MATSUMURA J. Coll. Agric. Sapporo **7** pp. 351–414.—*L. coloradensis* p. 133, *palmerae* p. 135, *braggii* p. 138, **spp. n.**, Colorado pls. x & xi, GILLETTE Ann. ent. Soc. Amer. **10.**

Longiunguis **gen. n.** near *Aphis* p. 112, *odinae* p. 113 **sp. n.**, VAN DER GOOT Contrib. faune Ind. Néerl. **1** Fasc. 3.

Macchiatiella **gen. n.** p. 211, *trifolii* **sp. n.** Eritrea p. 210 pl. ii figs 6–8, DEL GUERCIO Redia **12.**

Macrosiphon sonchi var. n. *flavomarginata* p. 224 pl. iii. figs. 36 & 37, DEL GUERCIO Redia **12.**—*Macrosiphum rubifolium* p. 78, *euphorbiellum* p. 79, **spp. n.** England, THEOBALD Entomologist **50.** —*M. gravelii* **sp. n.** Darjiling p. 175, VAN DER GOOT Rec. Ind. Mus. **13.**—*M. salcicola, malvicola, kuricola, petasitis, gobonis, hagicola, ibarae, mumecola, primulana, seneciones, sonchicola, yomogicola,* **spp. n.** Japan, MATSUMURA J. Coll. Agric. Sapporo **7** pp. 351–414.

Macrosiphoniella citricola p. 34 **sp. n.** Java, VAN DER GOOT Contrib. faune Indes Néerl. **1** Fasc. 3.

Mansakia **gen. n.** *Pemphiginae, miyabei* **sp. n.**, MATSUMURA Essays Nawa p. 39–94 with **3** pls.

Melanaphis **gen. n.** near *Aphis,* VAN DER GOOT Contrib. faune Ind. Néerl. **1** Fasc. 3 p. 61.

Melanoxanthus vignae **sp. n.** Japan, MATSUMURA J. Coll. Agric. Sapporo **7** p. 351–414.

Micromyzus **gen. n.** near *Myzus,* VAN DER GOOT Contrib. faune Ind. Néerl. **1** Fasc. 3 p. 52.—*M. nigrum* **sp. n.** Java, VAN DER GOOT Contrib. faune Ind. Néerl. **1** Fasc. 3 p. 53.

Myzocallis sawashibae, Kashiwae *sasae,* **spp. n.** Japan, MATSUMURA J. Coll. Agric. Sapporo **7** pp. 351–414.—*M. californicus* **sp. n.** p. 421, BAKER J. econ. Ent. **10.**—*M. essigi* p. 62, *woodworthi* p. 63 pl. vii, **spp. n.** California, SHINJI Ent. News **28.**

Myzus festucae **sp. n.** England p. 80, THEOBALD Entomol. **50.**—*M. mononis, sakurae, sasakii,* **spp. n.** Japan, MATSUMURA J. Coll. Agric. Sapporo **7** pp. 351–414.—*M. ribifolii* **sp. n.** U.S. p. 294 figs., DAVIDSON J. econ. Ent. **10.** —*M. godetiae* **sp. n.** California p. 49, fig., SHINJI Canad. Ent. **49.**—*M. cerasi,* habits, ROSS p. 434 Canad. Ent. **49.**

Nectarosiphum rubicola ♂, SHINJI p. 84 Psyche **24.**

Neomyzus **gen. n.** near *Myzus,* VAN DER GOOT Contrib. faune Ind. Néerl. **1** Fasc. 3 p. 50.

Neorhizobius **gen. n.** p. 251, *ulmiphilus* p. 244 pl. iv. figs. 67–69, *poae* p. 247 figs. 70–72, *stramineus* p. 249 figs. 73 & 74, **spp. n.** Europe, DEL GUERCIO Redia **12**.

Nippocallis **gen. n.**, *kuricola* **sp. n.** Japan, MATSUMURA J. Coll. Agric. Sapporo **7** pp. 351–414.

Nippolachnus **gen. n.**, *piri*, *abietinus*, **spp. n.** Japan, MATSUMURA T.c.

Nipponaphis yanonis **sp. n.**, MATSUMURA Essays Nawa pp. 39–94.

Nipposiphum **gen. n.**, *salcicola* **sp. n.** Japan, MATSUMURA J. Coll. Agric. Sapporo **7** pp. 351–414.

Nishiyana **gen. n.** *Pemphiginae*, *aomoriensis* **sp. n.**, MATSUMURA Essays Nawa pp. 39–94.

Nurudea **gen. n.** *Pemphiginae ibofushi* **sp. n.**, MATSUMURA T.c.

Nurudeopsis **gen. n.** *Pemphiginae*, *shirai*, *yanonicila*, **spp. n.** MATSUMURA p. 39–94 T.c.

Oedisiphum **gen n.** p. 122, *compositarum* **sp. n.** Java p. 123, VAN DER GOOT Contrib. faune Ind. Néerl. **1** Fasc. 3 p. 123.

Oregma basalis p. 181, *graminom* p. 184, *loranthi* p. 194, *lutescens* p. 197, *minuta* p. 201, *montana* p. 205, *nipae* p. 208, *pallida* p. 212, *panici* p. 214, *rhapidis* p. 217, *sulatigensis* p. 219, *similis* p. 223, *striata* p. 226, *sundanica* p. 230, **spp. n.** Java, VAN DER GOOT T.c.

Pemphigus dorocola, *nisshimae*, **spp. n.** MATSUMURA Essays Nawa p. 39–94 3 pls.—*P. betae* habits, life cycle, MAXSON J. Econ. Ent. **9** 1916 pp. 500–505.

Pentalonia catadii **sp. n.** Java, VAN DER GOOT Contrib. faune. ind. Néerl. **1** Fasc. 3 p. 57.

Phorodon minutum p. 43, *polygoni* p. 44, **spp. n.** Java, VAN DER GOOT T.c. —*P. asacola* **sp. n.** Japan, MATSUMURA J. Coll. Agric. Sapporo **7** pp. 351–414.

Procaphilus approximatus **sp. n.** U. S. p. 418, PATCH J. econ. ent. **10**.

Pterochlorus japonicus, *ogasawarae*, **spp. n.** Japan, MATSUMURA J. Coll. Agric. Sapporo **7** pp. 351–414.

Pterocomma media **sp. n.** U. S. p. 431, BAKER J. econ. ent. **10**.

Rhopalosiphum vagans **sp. n.** India p. 177, VAN DER GOOT Rec. Ind. Mus. **13**.—*R. oleraceae* p. 40 **sp. n.** Java, VAN DER GOOT Contrib. faune. Ind. Néerl. **1** Fasc. 3.

Saltusaphis americanus p. 3, *elongatus* p. 4, *virginicus* p. 7, **spp. n.** U. S., 3 pls., BAKER Canad. ent. **49**.

Schizoneura japonica **sp. n.**, MATSUMURA Essays Nawa pp. 39–94.—*S. ulmi* p. 252 pl. iv. figs. 75–77, *S.* "del melo" pp. 257–273 figs. 78–85, DEL GUERCIO Redia **12**.

†*Schizoneura patchi* **sp. n.** Aquitanien, Allemagne, MEUNIER Amsterdam Verh. Akad. 2e Sect. **20** p. 7.

Schizoneuraphis **gen. n.** p. 245, *distylii* p. 247, *foliorum* p. 250, *gallarum* p. 252, **spp. n.** Java, VAN DER GOOT Contrib. faune Ind. Néerl. **1** Fasc. 3.

Schlechtendalia mimifashi, *intermedia*, *miyabei*, **spp. n.** MATSUMURA Essays Nawa pp. 39–94.—*Schlechtendalia*; gall on *Rhus*, BAKER pp 385–393 pl xxvi ent. News **28**.

Semiaphis montana **sp. n.** Java, VAN DER GOOT Contrib. faune Ind. Néerl. **1** Fasc. 3 p. 119.

Serrataphis **gen. n.**, VAN DER GOOT p. 263 T.c.

Setaphis **gen. n.** *Setaphidina* trib. nova., p. 153, *lutens* p. 154, *viridis* p. 158, **spp. n.** Java, VAN DER GOOT T.c.

Siphocoryne acericola, *fraxinicola*, **spp. n.** Japan, MATSUMURA J. Coll. Agric. Sapporo **7** pp. 351–414.

Takecallis **gen. n.**, *bambusae* **sp. n.** Japan, MATSUMURA T.c.

Tetraneura javensis **sp. n.** Java, VAN DER GOOT Contrib. faune Ind. Néerl. **1** Fasc. 3 p. 260.—*T. yesoensis*, *fusiformis*, **spp. n.**, MATSUMURA Essays Nawa pp. 39–94

Thomasia californiensis **sp. n.** p. 61 figs., SHINJI Ent. News **28**.

Thoracaphis **gen. n.**, *arboris* **sp. n.** Java, VAN DER GOOT Contrib. faune Ind. Néerl. **1** Fasc. 3 p. 243.

Thripsaphis **gen. n.** type *ballii* Gill. p. 193 figs., *verrucosa* p. 194, *producta* p. 196, **spp. n.** Colorado, GILLETTE Canad. Ent. **49**.

Todolachnus gen. n., *abietis* sp. n. Japan, MATSUMURA J. Coll. Agric. Sapporo 7 pp. 351–414.

Toxoptera aphoides p. 73, *cyperi* p. 81, *djarani* p. 84, *minuta* p. 86, spp. n. Java, VAN DER GOOT Contrib. faune Ind. Néerl. 1 Fasc. 3.—*T. piricola* sp. n. Japan, MATSUMURA J. Coll. Agric. Sapporo 7 pp. 351–414.—*T. aurantii* var. n. *limonii* p. 227 pl. iii figs. 38–43, DEL GUERCIO Redia 12. —*T. coffeae*, THEOBALD Bull. ent. Res. 7 pp. 337–342 figs.

Trichosiphum dubium p. 178, *montanum* p. 179, spp. n. India, VAN DER GOOT Rec. Ind. Mus. 13.—*T. nigrum, formosanum, nigrofasciatum*, spp. n., MAKI Essays Nawa pp. 9–20 3 pls.

Uraphis gen. n. for part of *Aphis* DEL GUERCIO pp. 209 Redia 12.

Watabura gen. n. *Pemphiginae, nishiyae* sp. n. MATSUMURA Essays Nawa pp. 39–94.

Yamataphis gen. n., *orizae* sp. n. Japan, MATSUMURA J. Coll. Agric. Sapporo 7 pp. 351–414.

Yamatocallis gen. n., *hirayamae* sp. n. Japan, MATSUMURA T.c.

Yezabura gen. n., *sasae* sp. n. Japan, MATSUMURA T.c.

Yezaphis gen. n., *sasicola* sp. n. Japan, MATSUMURA T.c.

Yezocallis gen. n., *alniaria, kabae*, spp. n. Japan, MATSUMURA T.c.

ALEURODIDAE.

Additions to the family, etc., QUAINTANCE & BAKER P. U. S. Nat. Mus. 51 pp. 335–445 pls. 32–77.

Aleurocanthus dissimilis p. 342 pl. 34 figs. 1–9, *longispinus* p. 344 pl. 35 figs. 1–6, Burma, *mangiferae* p. 345 pl. 36 figs. 1–9 India, *serratus* Java p. 349 pl. 37 figs. 7–10, spp. n. QUAINTANCE & BAKER T.c.

Aleurocybotus setiferus sp. n. Ceylon p. 357 pl. xl f. 2, QUAINTANCE & BAKER T.c.

Aleurodes vaporariorum, parthenogenesis, WILLIAMS J. Genetics 6 pp. 255–267.

Aleurolobus flavus Ceylon p. 360 pl. xlii figs. 1–8, *philippinensis* p. 369 pl. xliv figs. 1–20, *setigerus* Ceylon p. 372 pl. xlv figs. 1–6, *solitarius* Amer. bor. p. 377 pl. xlvii figs. 8–13, spp. n., QUAINTANCE & BAKER P. U. S. Nat. Mus. 51.

Aleuroparadoxus sp. n. Chile p. 380 pl. xlviii f. 2, QUAINTANCE & BAKER T.c.

Aleuroplatus (*Orchamus* subg. n.), *mammaeferus* sp. n. Java p. 400, QUAINTANCE & BAKER T.c.

Dialeurodes radiipuncta Ceylon p. 418 pl. lxvi figs. 5–7, *tricolor* Brazil p. 419 figs. 8–13, *D.* (*Rusostigma* subg. n.) *radiirugosa* Java p. 421 pl. lxix figs. 1–9, *D.* (*Dialeuronomada* subg. n.) *dissimilis* India p. 424 pl. lxx figs. 1–4, *D.* (*Rabdostigma* subg. n.) *radiilinealis* Ceylon p. 425 pl. lxx figs. 5–8, *D.* (*Gigaleurodes* subg. n.) *cerifera* Cape Town p. 427 pl. lxxi figs. 1–4, *buscki* Porto Rico p. 428 figs. 5–12, *maxima* Philippines p. 429 pl. lxxii figs. 6–9, *D.* (*Rhachisphora* subg. n.) *rutherfordi* p. 432 pl. lxxiv f. 1, *trilobitoides* p. 433 pl. lxxv figs. 6–11, *D.* (*Dialeuropora* subg. n.) *decempunctata* p. 434 pl. lxxvi figs. 1–7 Ceylon, *D.* (*Dialeuroplata* subg. n.) *townsendi* Philippines p. 436 pl. lxxiii figs. 5–9, spp. n. QUAINTANCE & BAKER T.c.

Dialeuronomada subg. n. vide *Dialeurodes.*

Dialeuroplata subg. n. vide *Dialeurodes.*

Dialeuropora subg. n. vide *Dialeurodes.*

Gigaleurodes subg. n. vide *Dialeurodes.*

Orchamus subg. n. vide *Aleuroplatus.*

Philodamus subg. n. of *Aleurothrixus* for *Aleurodes interrogationis* Brown, QUAINTANCE & BAKER p. 404 P. U. S. Nat. Mus. 51.

Rabdostigma subg. n. vide *Dialeurodes.*

Rhachisphora subg. n. vide *Dialeurodes.*

Rusostigma subg. n. vide *Dialeurodes.*

Tetralicia gen. n. p. 60, *ericae* sp. n. England p. 61, HARRISON Vasculum 3; *T. ericae*, also Entomol. 50 p. 170.

COCCIDAE.

List of Italian Coccidae, LEONARDI pp. 209–216 Boll. Lab. Portici **12**.

Notes on various exotic Coccidae, NEWSTEAD pp. 125–134 Bull. ent. Res. **8**.

Coccidae at S. Thomé, SEABRA Mem. Soc. portugaise **3** pp. 1–23.

Uganda Coccidae, annotated list, GOWDEY pp. 187–189 Bull. ent. Res. **8**.

Introduced Coccidae, S. Africa, BRAIN & KELLY Bull. ent. Res. **8** pp. 181–185.

Japanese Coccidae, list, KUWANA Essays Nawa 1917.

British Guiana *Coccidae*, annotated list, BODKIN pp. 103–109 Bull. ent. Res. **8**.

Coccidae affecting certain plant genera, GREEN Ann. appl. Biol. **4** pp. 75–89.

The antennae, HOLLINGER pp. 264–271 pls. xix–xxii Ann. ent. Soc. Amer. **10**.

Dispersion of scale insects by the wind, QUAYLE, J. Econ. ent. **9** 1916 pp. 486–492.

The scale, composition, solubility, MAULIK Bull. ent. Res. **7** pp. 267–269.

Aclerda berlesei, stages, TEODORO Atti Soc. Ven. Trent. **8** p. 147.

Akermes andersoni E. Africa p. 347, *quinquepori* p. 349 Guiana, **spp. n.**, NEWSTEAD Bull. ent. Res. **7**.

Aspidiotus ligusticus **sp. n.** Italy p. 189, figs., LEONARDI Boll. Lab. Portici **12**.—*A.* (*Chrysomphalus*) *erythraspidis* Guiana **sp. n.** p. 372 figs., *A. fimbriatus* var. n. *capensis* p. 373 figs., *A. mauritianus* p. 374 figs., *pimentae* Jamaica p. 375 pl. vii, **spp. n.** NEWSTEAD Bull. ent. Res. **7**.—*A. perniciosus*, WILSON Agric. Exp. Sta. Oregon, Rep. **1911–12** 1913 pp. 112–115 pls. vii viii; ff. 8 9; life-history in Illinois pp. 546–550 f. 1, FORBES Agric. Exp. Sta. Illinois Bull. 180 1915 pp. 545–561 ff. 1–3.

Aspidoproctus neavei p. 4 figs., *verrucosus* p. 5, **spp. n.** Africa, NEWSTEAD Bull. ent. Res. **8**.

Asterolecanium spectabile **sp. n.** Mauritius p. 15, NEWSTEAD T.c.

Ceroplastes avicenniae Guiana p. 24, *bipartitus* p. 25 figs., *destructor* p. 26 figs., Africa, **spp. n.**, *egbarum* ♂ p. 28 fig., *lamborni* p. 29, *subdenudatus* p. 30, *zonatus* p. 32 figs., **spp. n.** Africa, *vuilleti* p. 30, NEWSTEAD T.c.

Chionaspis distorta p. 377 figs., *capensis* p. 378, *fici* p. 379 figs., **spp. n.** Africa, NEWSTEAD T.c.

Chrysomphalus obscurus var. n. *lahillei* p. 243 figs., LIZER Physis **3**.—*C. dictyospermi*, variation, MALENOTTI pp. 109–123 figs. Redia **12**.

Dactylopius hilli **sp. n.** p. 885, FROGGATT Agric. Gaz. N.S.W. **27** 1916.

Diaspis annae **sp. n.** Barbados p. 188 figs., MALENOTTI Redia **12**.

Eriococcus cactearum **sp. n.** Italy p. 206 figs., LEONARDI Boll. Lab. Portici **12**.—*E. sojae* **sp. n.**, KUWANA Konch. Sek. Gifu **21** pp. 136–139.—*E. angulatus* p. 426, *busariae* p. 428 pl. xxi f. 2, *crofti* p. 430 f. 4, *gregarius* p. 569 pl. xxiii f. 3, *picta* p. 573 pl. xxiv f. 1, *tesselatus* p. 576, *villosa* p. 577 f. 4, **spp. n.** Australia, FROGGATT Agric. Gaz. N.S.W. **27** 1916.

Eriopeltis festucae puparium ♂, GREEN p. 210 ent. Mo. Mag. **53**.

Erium frenellae p. 810 fig., *newmani* p. 812, **spp. n.** Australia, FROGGATT Agric. Gaz. N.S.W. **27** 1916.

Eulecanium piligerum **sp. n.** Italy p. 195 figs., LEONARDI Boll. Lab. Portici **12**.

Icerya nigroareolata **sp. n.** p. 8 figs. *sulfurea* var. n. *pattersoni* p. 9 figs., NEWSTEAD Bull. ent. Res. **8**.—*I. subandina*, ♂, LIZER p. 246 figs., Physis **3**.—*I. purchasi*, FLETCHER Agric. J. India **12** pp. 525–531 pl xxxviii copula, SHINJI p. 162 ent. News **28**.

Inglisia theobromae **sp. n.** Uganda p. 33 figs., NEWSTEAD Bull. ent. Res. **8**.

Kuwania gorodetskia, GREEN p. 268 ent. Mo. Mag. **53**.

Lecaniodiaspis tarsalis **sp. n.** Pretoria p. 16 figs., NEWSTEAD Bull. ent. Res. **8**.

Lecanium persicae crudum subsp. n. p. 202, *zebrinum* p. 203 fig., *transvittatum* p. 206 fig., **spp. n.** England, GREEN ent. Mo. Mag. **53.**—*L. hirsutum* E. Africa p. 350 figs., *pseudotessellatum* Trinidad p. 351 figs., *wardi* p. 353 figs., *aequale* p. 354 figs., Guiana, *acaciae* p. 355 figs., *adersi* p. 357 figs., *cajani* p. 359 figs., Africa, *L.* (*Saissetia*) *hurae* Guiana p. 361 figs., *persimile* p. 362, *subhemisphaericum*, *signatum*, p. 363, Africa, *scutatum* Guiana p. 364 figs., *subpatelliforme* p. 366 figs., *subhirsutum* p. 367 figs., *L. setigerum* p. 368 figs., Africa, *L.* (*Eucalymnatus*) *chelonioides* Guiana p. 369 figs., **spp. n.**, *L. hesperidum* ♂ pl. vi p. 360, NEWSTEAD Bull. ent. Res. **7**—*L. corni*, natural history, pp. 309–317 pls. xv and xvi, FENTON Canad. ent. **49.**

Lecanopsis butleri **sp. n.** England p. 208, GREEN ent. Mo. Mag. **53.**

Lepidosaphes desmidioides **sp. n.** Kew p. 267 fig., GREEN T.c.—*L. tuberculata* Italy p. 183, *diaspidiformis* Chile p. 185, **spp. n.**, figs., MALENOTTI Redia **12.**—*L. luzonica* **sp. n.**, ROBINSON p. 35 Philipp. J. Sci. D. **12.**

Llaveia abrahami **sp. n.** Guiana p. 1, *primitiva* var. n. *pimentae* p 2, NEWSTEAD Bull. ent. Res. **8.**

Margarodes buxtoni **sp. n.** Algeria p. 10 figs., NEWSTEAD T.c.

Monophlebus hirtus, NEWSTEAD p. 3 fig. T.c.

Palaeococcus bicolor p. 5, *caudatus* p. 6, *cajani* p. 7 figs., **spp. n.** Africa, NEWSTEAD T.c.

Phenacaspis pellucida, *thoracica*, p. 22, *pallida* p. 23, **spp. n.** Philippines, ROBINSON Philipp. J. Sci. D. **12.**

Phenacoccus ballardi **sp. n.** India p. 17, NEWSTEAD Bull. ent. Res. **8.**—*P pettiti* **sp. n.** U.S. p. 281, figs., HOLLINGER Canad. ent. **49.**

Physokermes piceae, natural history, FENTON pp. 317-320 pls. xv and xvi Canad. ent. **49.**

Platysaissetia carpenteri p. 343, *ferox* p. 344, **spp. n.** Africa, NEWSTEAD Bull. ent. Res. **7.**

Pseudococcus nipae p. 262 fig., *longispinus* var. n. *latipes* p. 264 fig., *newsteadi* **sp. n.** England p. 265 fig., GREEN ent. Mo. Mag. **53.**

Pseudococcus diminutus p. 198, figs., *notabilis* p. 201 figs., **spp. n.** Italy, LEONARDI Boll. Lab. Portici **12.**—*P. stolatus* **sp. n.** Australia p. 135 fig., FROGGATT Agric. Gaz. N.S.W. **28.**—*P. jessica*, ♀ HOLLINGER p. 19 figs. Canad. ent. **49.**

Pulvinaria aristolochiae p. 19 figs. Gold Coast, *elongata* Guiana p. 20 figs., *subterranea* Uganda p. 22 figs., *africana* p. 23 figs., **spp. n.**, NEWSTEAD Bull. ent. Res. **8.**

Ripersia silvestrii **sp. n.** Italy p. 203, figs., LEONARDI Boll. Lab. Portici **12.**

Sahlbergella singularis, habits, MAYNE Bull. Agric. Congo belge **7** pp. 198-200.

Stictococcus intermedius **sp. n.** Gold Coast p. 12 figs., *multispinosus* ♂ p. 14 figs., NEWSTEAD Bull. ent. Res. **8.**

Stomacoccus **gen. n.** *Xylococcini*, *platani* **sp. n.** California p. 375, FERRIS Canad. Ent. **49.**

Tachardia bodkini **sp. n.** Guiana p. 18, NEWSTEAD Bull. ent. Res. **8.**

Xylococcus alni **sp. n.** U. S. p. 158 figs., FLORENCE Ann. ent. Soc. Amer. **10.**

ELLIPOPTERA or ANOPLURA.

List of mammalian hosts, Africa, of Anoplura and Mallophaga pp. 245-252, FERRIS Ann. Durban Mus. **1**, 1916.

Pediculus; bibliography, NUTTALL pp. 1-42 Parasitology **10**; *P.* and disease, ID. pp. 43-79 T.c. pl. i.; natural history, ID. T.c. pp. 80-185 pls. ii. and iii.; HOWLETT p. 186 T.c.

Pediculus capitis and *humanus*, identity (?), BACOT Pr. ent. Soc. Lond. **1917** pp. 5-7.—*P. humanus*, *capitis*, hybrids, etc., BACOT Parasitology **9** pp. 228-258; breeding, heredity, HINDLE pp. 259-265 T.c.; The copulatory structures, NUTTALL pp. 293-324 pls. iii. and iv. T.c.

Polyplax calva **sp. n.** Africa, WATERSTON Parasitol. **9**.—*P. cummingsi* **sp. n.** Zululand p. 240 figs., FERRIS Ann. Durban Mus. **1** 1916.

Scipio breviceps **sp. n.** S. Africa p. 234 figs., FERRIS Ann. Durban Mus. **1** 1916.

PSOCOPTERA.

Belapha **gen. n.** near *Reuterella* p. 254, *schoutedeni* **sp. n.** Congo p. 255 figs., ENDERLEIN Zool. Anz. **49**.

Caecilius pedicularius, swarms, GRAY Ann. appl. Biol. **4** p. 47.

Psocus burmeisteri **sp. n.** Argentina p. 12, NAVÁS Mem. Ac. Barcelona **13** No. 26.

THYSANOPTERA.

List of Swedish spp., TULLGREN Ent. Tidskr. **38** p. 33.

Annotated list, Maryland, HOOD Insec. inscit. **5** pp. 53-65.

†*Aeolothrips brodiei* **sp. n.** Isle of Wight oligocene p. 381 f. 12, COCKERELL P. U. S. nat. Mus. **52**.

Cryptothrips collaris **sp. n.** St. Vincent p. 26 fig., BAGNALL J. Zool. Research **2**.

Hoplandrothrips xanthopoides p. 22 figs., *brunneicornis* p. 23 fig., **spp. n.** St. Vincent, BAGNALL T.c.

Malacothrips modestus **sp. n.** St. Vincent p. 24 fig., BAGNALL T.c.

Parthenothrips kobusi **sp. n.** Java p. 289 pl. xxxviii f. 3, VAN DEVENTER Handb. Suik.-cult. **2** 1912.

Physothrips xanthius **sp. n.** Trinidad p. 59 fig., WILLIAMS Bull. ent. Res. **8**.

Stenothrips zehntneri **sp. n.** Java p. 290 pl. xxxviii f. 4, VAN DEVENTER Handb. Suik.-cult. **2** 1912.

Thrips minuta **sp. n.** Java p. 292 pl. xxxix f. 3, VAN DEVENTER Handb. Suik.-cult. **2** 1912.—*T. porteri* **sp. n.** Chile p. 109, BRÈTHES Revist. chilena **20** 1916.

LIPOPTERA OR MALLOPHAGA.

List of mammalian hosts of Mallophaga and Anoplura, Africa, FERRIS Ann. Durban Mus. **1** 1916 pp. 245-252.

Cecalymenus **gen. n.** near *Giebelia*, *oestrelatae* **sp. n.** figs., ENDERLEIN p. 242 Zool. Anz. **49**.

Docophoroides harrisoni **sp. n.** from *Diomedea* p. 99, WATERSTON Ent. Mo. Mag. **53**.

Goniocotes microcephalus, *kurodai*, **spp. n.** Formosa, UCHIDA Tokyo, J. Coll. Agric. **3** pp. 171-188.

Goniodes zenaidurae **sp. n.** p. 433 pl. xxviii. figs. 1-4, MCGREGOR Ent. News **28**.

Laemobothrium intermedium **sp. n.** on *Falco*, MCGREGOR p. 434 pl. xxviii. f. 2 Ent. News **28**.

Lipeurus nigropunctatus **sp. n.** p. 243, fig., ENDERLEIN Zool. Anz. **49**.—*L. annuliventris*, *formosanus*, *turturis*, **spp. n.**, UCHIDA Annot. Zool. Jap. Tokyo **9** pp. 201-215.—*L. intermedius var. major* n. var., UCHIDA Tokyo J. Coll Agric. **3** pp. 171-188.—*L. brevicephalus* p. 105 pl. v. f. 2, *crotophagae* p. 106 f. 4, *mississipiensis* p. 107 f. 1, *texanus* p. 109 pl. vi. f. 1. *bishoppi* p. 111 f. 2, *aberrans* p. 112 pl. vii. f. 1, *lineatus* p. 114 pl. vii. f. 2, *clavatus* p. 115 f. 3, **spp. n.** U. S., MCGREGOR Psyche **24**.

Menopon longipectum, urocissae, mikadokiji, **spp. n.**, Formosa, UCHIDA Tokyo J. Coll. Agric. **3** 1917 pp. 171–188.

Nirmus ovatus **sp. n.** Formosa, UCHIDA pp. 171–188 T.c.

Philopterus ambiguus, PAINE p. 231 pl. xxxii P. U. S. nat. Mus. **53.**

Physostomum melospizae **sp. n.** p. 436 pl. xxviii f. 3, MCGREGOR Ent. News. **28.**

Trichodectes kingi p. 167, *floridanus* p. 168, *thomomyus* p. 169, *monticolus* p. 171, *scleritus* p. 172, *odocili* p. 173, **spp. n.**, Am. bor., 2 pls., MCGREGOR Ann. ent. Soc. Amer. **10.**

ISOPTERA.

Termitidae at S. Thomé, SEABRA Mem. Soc. portugaise **3** pp. 24–28 figs.

Termites indo-malais ; BUGNION Bul. Soc. Sci. Nat. Lausanne **49** 1914.

Origin of castes, THOMPSON J. Morphol. **30** pp. 83–136.

Arrhinotermes ponapiensis **sp. n.** p. 196, OSHIMA Annot. zool. Jap. **9.**

Calotermes (*Neotermes*) *malatensis* **sp. n.** p. 221, OSHIMA Philipp. J. Sci. D. **12.**

Calotermes (*Neotermes*) *kanehirae* **sp. n.** Caroline islds. p. 195, OSHIMA Annot. Zool. Jap. **9.**

Epicalotermes **gen. n.** p. 347, *aethiopicus* **sp. n.** p. 348, figs., SILVESTRI Boll. Lab. Portici **12.**

Eutermes (*Hospitalitermes*) *luzonensis* p. 223, *E. balintauacensis* p. 224, **spp. n.**, OSHIMA Philipp. J. Sci. D. **12.**—*E.* (*Grallatotermes*) *brevirostris* **sp. n.** Caroline islds. p. 198, OSHIMA Annot. Zool. Jap. **9.**

†*Hodotermes tristis* **sp. n.** burmese amber p. 329, COCKERELL Ann. Amer. ent. Soc. **10.**

Microcerotermes secernens **sp. n.** Kongo, SCHMITZ Tydschr. Ent. **60** p. 225.

Neotermes erythraeus **sp. n.** p. 350 figs., SILVESTRI Boll. Lab. Portici **12.**

Procubitermes undulans **sp. n.** Kongo, SCHMITZ Tyds. Ent. **60** p. 230.

Promirotermes gracilipes **sp. n.** Kongo, SCHMITZ Tyds. Ent. **60** p. 227.

EMBIOPTERA.

Embiidae and *Grylloblattidae*, CRAMPTON Canad. Ent. **49** pp. 213–217.

Embia femorata **sp. n.** Congo p. 179, NAVÁS Rev. Zool. Afric. **4** 1916.

Embonycha **gen. n.** p. 15, *interrupta* **sp. n.** Cochin China p. 16 fig., NAVÁS Insecta **7.**

Enveja **gen. n.**, *bequaerti* **sp. n.** Congo, NAVÁS p. 180 Rev. Zool. Afric. **4** 1916.

Oligotoma rochai **sp. n.** Brazil p. 281, NAVÁS Ent. Mitt. **6.**—*O. latreilli* = (*Embia rochai* Nav.), KRAUSS p. 316 Ent. Mitt. **6.**

PLECOPTERA.

Capnia dusmeti p. 6, *maynari* p. 7, **spp. n.**, Spain, NAVÁS Mem. Ac. Barcelona **13** No. 26.

Napcia **gen. n.** p. 8 for *Capnia libera* Nav., NAVÁS T.c.

Neoperla; larvae from trop. Africa described, LESTAGE pp. 134–140 Rev. zool. afric. **5**.

Perla bicaudata var. n. *asturica* p. 5, NAVÁS Mem. Ac. Barcelona **13** No. 26.

Perlodes fonti p. 199, *principissa* p. 201 fig., spp. n., Catalonia, NAVÁS Annuar. Junta Ci. Nat. Barcelona **2**.

Senzilla gen. n. p. 192, *Senzillidae* fam. n. p. 191, *tunelina* sp. n. Argentina p. 192 fig., NAVÁS Physis **3**.

EPHEMEROPTERA.

Phylogeny of Ephemeridae, LAMEERE Bull. Soc. Zool. France **42** pp. 41–59 and 61–81.

Larvae from trop. Africa described, LESTAGE pp. 122–134 figs. Rev. zool. afric. **5**.

Georgian bay Ephemeridae nymphs etc., CLEMENS pp. 113–128 2 pls. Contr. Canad. Biol. 1915; life histories pp. 131–143 pls. xv–xviii.

Larva allied to *Oligoneuria* and *Chirotenetes*, LESTAGE Rev. zool. Afric. **4** pp. 314–318 figs.

Baëtis subalysinus p. 187, *scanicus* p. 188, spp. n., Sweden, BENGTSSON Ent. Tidskr. **38**.

Cœnis nivea p. 181, *moesta* p. 182, *nocturna* p. 185, spp. n., Sweden, *horaria, incus* p. 181, *macrura* p. 183, BENGTSSON T.c.

Callibaetis apicotus p. 189 fig., *apertus* p. 190, spp. n., Argentina, NAVÁS Physis **3**.

Chirotenetes albomanicatus natural history, CLEMENS Toronto Univ. Stud. Biol. **17** 43 pp. 5 pls.

Ecdyurus joernensis imago ♂ larva, *fuscogriseus* larva, BENGTSSON Ent. Tidskr. **38** p. 193.

Ephemera longiventris sp. n. Tonkin p. 9 fig., NAVÁS Insecta **7**.

Ephemerella torrentium sp. n. Sweden, BENGTSSON Ent. Tidskr. **38** p. 178.

Euphyurus; larva, imago, BENGTSSON p. 177 T.c.

Eurycoenis gen. n., BENGTSSON p. 186 T.c.

Heptagenia sulphurea p. 191, *dalecarlica* p. 192, larvae, BENGTSSON T.c.

Leptophlebia placita, sp. n., Sweden, BENGTSSON p. 176 T.c.

Polymitarcys temerata sp. n. Congo p. 172, NAVÁS Rev. Zool. afric. **4** 1916.

Potameis elegans, minor, larvae, BENGTSSON Ent. Tidskr. **38** p. 190.

Rhithrogena soteria sp. n. Zaragoza p. 4, NAVÁS Mem. Ac. Barcelona **13**, No. 26.

Siphlurus aestivalis, zetterstedti, latus, BENGTSSON Ent. Tidskr. **38** p. 189.

Thraulus bonplandi, NAVÁS p. 188 Physis **3**.

PARANEUROPTERA.

Notes on Fabrician types, with synonymy, CAMPION Ann. Nat. hist. **19** pp. 441–450.

The biology of dragon-flies, 306 pp. 4 pls. TILLYARD; review by H. CAMPION Ent. Mo. Mag. **53** pp. 212–215.

Wing nervures, development, etc., NEEDHAM pp. 169–173 Ent. News **28**.

Nervuration, bridge formation, TILLYARD P. Linn. Soc. N.S.W. **41** pp. 871–887 figs.

Caudal gills, morphology, development, phylogeny; TILLYARD Proc. Linn. Soc. N.S.W. **42** pp. 31–112 & 606–632 6 pls.

The ♂ genitalia and the genera of hawaiian Agrioninae, KENNEDY pp. 9–14 pls. ii & iii Ent. News **28**.

Variation in size, etc., WANACH Ent. Mitt. **6** pp. 72–80.

Food habits of hawaiian, WARREN pp. 1–43 3 pls. Bull. Coll. Hawaii 3.

List of Swedish *Odonata*, WELANDER Ent. Tidskr. 38 p. 101.

Indiana, annotated list; WILLIAMSON Univ. Michigan Publ. 2 pp. 1–13.

Notes on species from Michigan, COMBS Univ. Michigan. Zool. occ. pap. 41 pp. 1–8.

Georgian bay, Odonata, WALKER Suppl. Rep. Dep. Fisheries 47 pp. 53–94.

Agrionidae of Illinois, monograph, nymphs, etc., GARMAN Bull. Illinois Lab. 12 No. 4 pp. 411–587 16 pls.

Quebec dragon-flies; FYLES Ottawa Nat. 29 p. 66–67.

Alberta, list, notes, WHITEHOUSE pp. 96–103 Canad. Ent. 49.

Costa Rican dragonflies, etc., CALVERT & CALVERT New York 1917 xix + 577 pp. illustr.

Nymphs & life histories, genitalia, of many Californian, KENNEDY P. U. S. nat. Mus. 52 pp. 483–635 398 figs.

Seasonal irregularities of occurrence, WALKER pp. 171–178 Canad. Ent. 49.

Aeolagrion gen. n. type *Agrion dorsale* p. 242, *demerarum* sp. n. Georgetown p. 244 figs., WILLIAMSON Ent. News 28.

Aeschna osiliensis sp. n. Livland, MIERZEJEWSKI p. 79 pls. xiv & xv Bull. Ac. Cracovie 1913.

Aeshna walkeri sp. n. California p. 588, KENNEDY P. U. S. nat. Mus. 52.

Agriocnemis thoracalis p. 35 pl. iv fig. 13, *trilobatus* p. 36 pl. iv fig. 14, spp. n., Queensland, SJÖSTEDT Ark. Zool. 11 No. 11.—*A. forcipata* sp. n. Congo, SJÖSTEDT Ark. Zool. 11 No. 14 p. 22 pl. iii figs. 2–5.

Agrion brisbanense sp. n. p. 477 pl. xxiii figs. 13 & 14, TILLYARD P. Linn. Soc. N.S.W. 42.—*A. aequabile* var. n. *californicum* p. 484, KENNEDY P. U. S. Nat. Mus. 52.

Amphisticta gen. n. p. 31, *silvarum* sp. n. p. 32 pl. i fig. 4, pl. iv figs. 1–2 Queensland, SJÖSTEDT Ark. Zool. 11 No. 11.

Archipetalia gen. n. *Petaliini, auriculata* sp. n. Tasmania, TILLYARD p. 455, figs., P. Linn. Soc. N.S.W. 42.

Argiolestes metallicus sp. n. Queensland, SJÖSTEDT Ark. Zool. 11 No. 11 p. 24 pl. iv. figs. 3–4.—*A. chrysoides* p. 475, figs., TILLYARD P. Linn. Soc. N.S.W. 42.

Austroaeschna speciosa sp. n. Queensland, SJÖSTEDT Ark. Zool. 11 No. 11 p. 18 pl. i fig. 1, pl. iv. figs. 7–8.—*A. hardyi* sp. n. Tasmania p. 461 pl. xxiii figs. 5 & 6, TILLYARD P. Linn. Soc. N.S.W. 42.

Austrogomphus mjoebergi p. 11 pl. ii figs. 6–9, pl. iii fig. 10, *pusillus* p. 13 pl. ii figs. 1–5 pl. iii fig. 11, spp. n. Australia, SJÖSTEDT Ark. Zool. 11 No. 11.

Austrosticta sorror sp. n. Australia, SJÖSTEDT p. 29 pl. iii figs. 5–9 T.c.

Brachythemis fuscopalliata, female, ♂ genitalia pl., FRASER J. Bombay Soc. 25 p. 282.

Calicnemis mortoni sp. n. India p. 326, *miles* n.n. for *eximia* Selys p. 330, LAIDLAW Rec. Ind. Mus. 13.

Celaenura gen. n. p. 495 type *Ischnura denticollis* Burm., *gemina* sp. n. California p. 497 figs, KENNEDY P. U. S. nat. Mus. 52.

Chlorolestes umbratus, sexes, figs., CAMPION pp. 149–152 Entomol. 50.

Chloroneura gen. n. for *Disparoneura quadrimaculata*, LAIDLAW p. 344 Rec. Ind. Mus. 13.

Ciliagrion gen. n. p. 5, *madagascarense* sp. n. p. 6 pl. i figs. 1–6, Madagascar, SJÖSTEDT Ark. Zool. 11 No. 13.

Coeliccia erici, simillima, p. 334, spp. n. India, LAIDLAW Rec. Ind. Mus. 13.

Copera vittata deccanensis subsp. n. p. 338, LAIDLAW T.c.

Cordulegaster dorsalis and *diadema*, KENNEDY p. 515 figs. P.U.S. nat. Mus. 52.

Cordulephya bidens sp. n. Queensland, SJÖSTEDT Ark. Zool. 11 No. 11 p. 7 pl. iii figs. 1–2.—*C. divergens* sp. n. Australia p. 467 pl. xxiii figs. 9 & 10, TILLYARD P. Linn. Soc. N.S.W. 42.

Disparoneura tetrica p. 345, *nigerrima* p. 346, **spp. n.** India, LAIDLAW Rec. Ind. Mus. **13.**

Drepanosticta **gen. n.** for *Protosticta carmichaeli* L., LAIDLAW p. 341 T.c.

Enallagma abessinicum p. 17 pl. iii fig. 10 Erithrea, *vaginale* p. 19 pl. iii figs. 6–7 Congo, **spp. n.**, SJÖSTEDT Ark. Zool. **11** No. 14.

Gomphus parvidens **sp. n.** Maryland p. 223, 2 pls., CURRIE P.U.S. nat. Mus. **53.**—*G. donneri* **sp. n.** California p. 562, figs., *olivaceus* var. n. *nevadensis* p. 557, KENNEDY P.U.S. nat. Mus. **52.**

Gynacantha maesi **sp. n.** Lake Leopold p. 104, SCHOUTEDEN Rev. Zool. Afric. **5.**

Hemiphlebia Leg. n., SJÖSTEDT Ark. Zool. **11** No. 11 p. 41.

Indocnemis **gen. n.** near *Platycnemis* p. 325, *kempi* **sp. n.** India p. 326 pl. xv. f. 2, LAIDLAW Rec. Ind. Mus. **13.**

Ischnura kauderni **sp. n.** Madagascar, SJÖSTEDT Ark. Zool. 11 No. 13 p. 4 pl. i figs. 9–11.

Macromia maesi **sp. n.** Lake Leopold p. 105, SCHOUTEDEN Rev. zool. afric. **5.**—*M. reginae*, RIS p. 147 Rev. suisse Zool. **25.**

Metaleptobasis byrsonima n.n. for *brysonima*, WILLIAMSON p. 8 Ent. News **28.**

Miocora **gen. n.** p. 259 near *Cora*, *peraltica* **sp. n.** Costa Rica p. 260, CALVERT Ent. News **28.**

Mombagrion congoënse **sp. n.** Congo, SJÖSTEDT Ark. Zool. **11** No. 14 p. 15 pl. i figs. 5–6, pl. iii figs. 8–9.

Neoneura and allies, genitalia, KENNEDY Ent. News 28 pp. 289–294 3 pls.

Neoneura joana p. 125 figs., *ethela* p. 222 figs., *mariana* p. 224 figs., *denticulata* p. 227 figs., *myrthea* p. 228 figs., *esthera* p. 232 figs., **spp. n.** Amer. mer., WILLIAMSON Tr. Amer. ent. Soc. **43.**

Ophiogomphus morrisoni var. n. *nevadensis* p. 536, *arizonicus* **sp. n.** p. 538, *occidentis* var. n. *californicus* p. 543, KENNEDY P.U.S. nat. Mus. **52.**

Philosina **gen. n.** near *Podagrion* p. 185, *buchi* **sp. n.** China p. 189 RIS Tyds. Ent. **60.**

Polythore **n. n.** for *Thore* auctt., CALVERT p. 263 Ent. News **28.**

Protosticta himalaiaca **sp. n.** p. 342 pl. xv. f. 6, LAIDLAW Rec. Ind. Mus. **13.**

Sapho superba **sp. n.** Kamerun, SJÖSTEDT Ark. Zool. **11** No. 14 p. 10 pl. ii figs. 1–3.

Somatochlora cingulata, allies, pl. xiii, *walkeri* **sp. n.** Alaska p. 229, KENNEDY Canad. Ent. **49.**

Sympetrum; nymphs, WALKER pp. 409–418 2 pls. Canad. Ent. **49.**

Synlestes selysi p. 473, *tropicus* p. 475, **spp. n.** Australia, figs., *weyersi nigrescens* subsp. n. p. 472, TILLYARD P. Linn. Soc. N.S.W. **42.**

Synthemiopsis **gen. n.** *Corduliinae* p. 463, *gomphomacromioides* **sp. n.** Tasmania p. 464 figs., TILLYARD T.c.

Tanypteryx **gen. n.** type *Tachopteryx hageni* Selys, KENNEDY p. 507 figs. P. U.S. nat. Mus. **52.**

Telephlebia godeffroyi mjoebergi subsp. n. Queensland, SJÖSTEDT Ark. Zool. **11** No. 11 p. 21 pl. i fig. 2 pl. ii figs. 11–12.—*T. tryoni* **sp. n.** Brisbane p. 459 pl. xxiii figs. 3 and 4, TILLYARD P. Linn. Soc. N.S.W. **42.**

Tilithemis **gen. n.**, *lindhlomi* **sp. n.** East Africa, SJÖSTEDT Ark. Zool. **11** No. 14 p. 4 pl. i figs. 1–4.

Umma puella **sp. n.** Kamerun, SJÖSTEDT p. 7 pl. iv figs. 1–4 pl. v fig. 1 T.c.

Zonagrion **gen. n.** type *A. gracile* Selys, KENNEDY p. 489 P. U.S. nat. Mus. **52.**

† EXTINCT ORDERS.

Paleodictyoptera discussed and divided, *Subulicornes* Latr. revised, LAMEERE pp. 101–104 Bull. Soc. ent. France **1917.**

†*Brodia priscotincta*, BOLTON p. 104 pl. vii figs. 3–6 Proc. Birmingham Soc. **14.**

†*Dictyoneuron higginsi* pl. iii f. 2 pp. 46–48, BOLTON Q. J. Geol. Soc. **72.**

†*Genentomum carri* **sp. n.** Pennsylvania carboniferous p. 81 fig., COCKERELL P. biol. Soc. Washington **30.**

†*Goldenbergia* (*Microdictya*) *hamyi* Brongn. p. 8 pl. 1 f. 5, BOLTON Mem. Manchester Soc. **61** No. 2.

†*Hypermegethes* redefined p. 58, *northumbriae* **sp. n.** p. 55 pl. iv figs. 2 and 3, BOLTON Q. J. Geol. Soc. **72.**

†*Megagnatha* **gen. n.**, *odonatiformis* **sp. n.** Commentry p. 2 pl. i figs. 1–4 (? *Sialidae*), BOLTON Mem. Manchester Soc. **61** No. 2.

†*Plaeocarria* **gen. n.** *Protorthoptera*, *ornata*, **sp. n.** U.S. carboniferous, COCKERELL p. 80 figs. P. biol. Soc. Washington **30.**

†*Palaeomantis* **gen. n.**, *macroptera* **sp. n.** Liverpool coal measures, BOLTON pp. 48–53 pl. iii figs. 3 and 4 Q. J. Geol. Soc. **72.**

†*Pseudofouquea cambrensis*, BOLTON p. 59 pl. iv figs. 4 and 5 Q. J. Geol. Soc. **72.**

†*Sagenoptera formosa* to *Goldenbergia*, BOLTON p. 10 Mem. Manchester Soc. **61** No. 2.

†*Spilaptera sutcliffei* **sp. n.** Rochdale coal measures p. 53 pl. iv f. 1, BOLTON Q. J. Geol. Soc. **72.**

ORTHOPTERA.

Inheritance and evolution in Orthoptera-*Paratettix*, NABOURS J. Genetics pp. 1–54 2 pls.; BELLAMY-*Tettigidea* t.c. pp. 55–70 pl.

Structure of abdominal apex, CHOPARD Arch. Zool. exp. **56** Notes p. 105–112 figs.

The Nederlands *Orthoptera*, WILLEMSE Tydschr. Ent. **60** pp. 1–176.

Forficulidae, Blattidae and Mantidae of Egypt, INNES Bey Mem. Soc. ent. Egypte 1 No. 3 78 pp. 4 pls. 1912.

Annotated list of Virginia Orthoptera, FOX P. U.S. nat. Mus. **52** pp. 199–234.

Mimetic Orthoptera in Mexico, HERRERA Bol. Est. Biol. Mexico **2** pp. 88–90 pls. i–iii.

Gonioptera subord. n. for *Gryllidae* p. 348, CRAMPTON Ent. News **26.**

Phytoptera subord. n. for *Locustida* p. 348, CRAMPTON T.c.

Palaeoptera **nom. n.** for *Blattoidea* p. 349, CRAMPTON T.c.

Cheleutoptera **nom. n.** for *Phasmoidea* p. 348, CRAMPTON T.c.

Phylloptera ord. n. for *Phylliidae* p. 347, CRAMPTON T.c.

Notoptera ord. n. for *Grylloblatidae* p. 347, CRAMPTON T.c.

Diphtheroptera ord. n. for *Acridiidae* p. 348, CRAMPTON T.c.

Paraphytoptera subord. n. for *Gryllotalpidae* p. 348, CRAMPTON T.c.

Protophytoptera subord. n. for *Phasmodes* etc. p. 348, CRAMPTON T.c.

Plecodermaptera subord. n. for *Arixenidae* p. 349, CRAMPTON T.c.

Super orders, *Panplecoptera* etc., CRAMPTON pp. 227–233 J. N. York Ent. Soc. **25.**

The thoracic sclerites and the systematic position of *Grylloblatta campodeiformis* Walker, a remarkable annectent, "Orthopteroid" insect, CRAMPTON Ent. News **26** 1915 p. 337–350 pl. xiii.

Structure of anterior parts and phylogeny of lower insects, CRAMPTON Ent. News **28** pp. 398–412 pl. xxvii.

FORFICULIDAE.

Annotated and synonymic list of North American, HEBARD pp. 311–323 Ent. News **28.**

Anisolabis vitilisi **sp. n.** Tonkin p. 58, BURR Ann. Soc. ent. France **86.**

Anisolabis recurvus **sp. n.** Philippines, Borelli Boll. Mus. Torino **30** No. 705 p. 2 1915.—*A. annulipes*, winged, study, Pantel Mem. Ac. Barcelona **14** No. 1.

Auchenomus fulvus p. 5, *vicinus* p. 6, **spp. n.** Philippines, Borelli Boll. Mus. Torino **30** No. 705 1915.

Chaetospania bakeri **sp. n.** Philippines p. 3, Borelli Boll. Mus. Torino **31** No. 715 1916.

Diplatys salvazae **sp. n.** Cambodia p. 62, Burr Ann. Soc. ent. France **86**.

Doru aculeatum Virginia, Caudell p. 217 P. ent. Soc. Washington **18**.

Forficula abrutiana **sp. n.** Abruzzi, Borelli Boll. Mus. Torino **31** No. 711 p. 1 1916.—*F. mandarina* **sp. n.** Szetschuan p. 2, Borelli Boll. Mus. Torino **30** No. 698 1915.—*F. auricularia* natural history, Chapman pp. 25–29 & 177–180 Ent. Rec. **29** 3 pls. *F. auricularia* in U. S., Jones Bull. U. S. Dep. Agric. ent. **566**.

Forcipula despinosa **sp. n.** India p. 234 pl. xvi f. 1, Hebard P. Ac. Philad. **69**.—*F. banksi* **sp. n.** p. 3 Philippines, Borelli Boll. Mus. Torino **30** No. 697 1915.

Formicilabia **gen. n.** p. 641, *caribea* **sp. n.** San Domingo p. 642 pl. lxiii f. 6, Rehn & Hebard Bull. Amer. Mus. **37**.

Kleiduchus variegatus **sp. n.** Tonkin p. 60, Burr Ann. Soc. ent. France **86**.

Kosmetor claviger **sp. n.** Indo-China p. 61, Burr T.c.—*K. tagalensis* **sp. n.** Philippines p. 6, Borelli Boll. Mus. Torino **30** No. 697 1915.—*K. intermedius* **sp. n.** Philippines p. 4, Borelli Boll. Mus. Torino **32** No. 726.

Labia barberi p. 239 pl. xvi f. 4, *nodifer* p. 240 f. 5, **spp. n.**, Guatemala, Hebard P. Ac. Philad. **69**.—*L. rehni* **sp. n.** Florida p. 317 figs., Hebard Ent. News **28**.

Litocosmia **gen. n.** near *Osteulcus*, *roraimae* **sp. n.** pl. xvi figs. 10 & 11, Hebard p. 247 P. Ac. Philad. **69**.

Praos uncinatus **sp. n.** Mexico, Borelli Boll. Mus. Torino **30** No. 699 p. 3 1915.

Prolabia ascensionis **sp. n.** Ascension island p. 243 pl. xvi figs. 8 & 9, Hebard P. Ac. Philad. **69**.—*P. dominicae* Dominica p. 643, *jamaicana* p. 645 figs., **spp. n.**, Rehn & Hebard Bull. Amer. Mus. **37**.—*P. mexicana* var. n. *longipennis*, Borelli Boll. Mus. Torino No. 699 p. 1 1915.

Proreus pusillus **sp. n.** Philippines, Borelli Boll. Mus. Torino **32** No. 721 p. 2.

Pseudisolabis elegans **sp. n.** India p. 236 pl. xvi figs. 2 & 3, Hebard P. Ac. Philad. **69**.

Spandex percheron, Hebard p. 232 T.c.

Spongovadtox (sic) *gracilis* **sp. n.** Philippines, Borelli Boll. Mus. Torino **31** No. 715 p. 2 1916.

Timomenus unidentatus p. 4, *inermis* p. 5, **spp. n.**, China, Borelli Boll. Mus. Torino **30** No. 698 1915.

Blattidae.

Aglaopteryx **gen. n.** p. 30, *gemma* **sp. n.** Alabama p. 32 pl. i figs. 9–12, Hebard Mem. Amer. ent. Soc. **2**.

Arenivaga rehni **sp. n.** Lower California p. 227, Hebard T.c.

Blatta americana growth of antennae and cerci, Bugnion C. R. Soc. Biol. **80** pp. 317–324.

Compsodes **gen. n.** near *Latindia* p. 208 type *L. delicatula* S. & Z., Hebard Mem. Amer. ent. Soc. **2**.

Deropeltis stefaniniana **sp. n.** Africa p. 280, Giglio Tos Redia **12**.

Eremoblatta hirsuta **sp. n.** Mexico p. 243 pl. ix figs. 21 & 22, Hebard Mem. Amer. ent. Soc. **2**.

Euthlastoblatta **gen. n.** p. 26 type *Anaplecta abortiva*, Hebard T.c.

Gyna scripta **sp. n.** Somaliland p. 281, Giglio-Tos Redia **12**.

Latiblattella **gen. n.** p. 36, *rehni* p. 38 pl. i figs. 13–17, *lucifrons* p. 43 figs. 18–23, **spp. n.**, U. S., Hebard Mem. Amer. ent. Soc. **2**.

Myrmecoblatta wheeleri **sp. n.** Guatemala p. 361, Hebard Ent. News **28**.

Nauphoeta paolina **sp. n.** Somaliland p. 281, GIGLIO-TOS Redia **12**.

†*Neomylacris meunieri* p. 11 pl. ii figs. 3–5, *lerichei* pl. iii figs. 1–5 p. **13**, **spp. n.**, Commentry, BOLTON Mem. Manchester Soc. **61** No. 2.

Parcoblatta **n. n.** for *Platamodes* Scudd. p. 70, *zebra* p. 89, *caudelli* p. 122, **spp. n.**, U. S., HEBARD Mem. Amer. ent. Soc. **2**.

†*Phylloblatta transversalis* **sp. n.** Birmingham coalfield, BOLTON p. 100 pl. vii figs. 1 & 2 Proc. Birmingham Soc. **14**.—*P. obscura* p. 19 pl. iii figs. 6–8, *stirrupi* p. 21 pl. v figs. 1–3, **spp. n.**, Commentry, *brongniarti* Handl. p. 16 pl. iv figs. i–v, BOLTON Mem. Manchester Soc. **61** No. 2.

Plectoptera floridana **sp. n.** p. 251 pl. x figs. 9–12, HEBARD Mem. Amer. ent. Soc. **2**.

Pseudomops septentrionalis **sp. n.** U. S. p. 156 pl. vi figs. 5–8, HEBARD T.c.

PHASMIDAE.

Structure of abdomen, PANTEL pp. 286–301 Ann. Soc. ent. France **86**.

†*Aedoeophasma anglica* pl. iii f. 1 pp. 43–46, BOLTON Q. J. Geol. Soc. **72**.

Carausius farcillatus p. 267, pl. ii, *lobulatipes* p. 274, *pustulosus* p. 277, C. sp. p. 279, **spp. n.**, India, PANTEL Ann. Soc. ent. France **86**.—*C. morosus*, natural history, ROTH Tr. ent. Soc. London **1916** pp. 345–395; ♂, FOUCHER C.R. Ac. Paris **165** p. 511.

Greenia bolivari to *Carausius*, PANTEL p. 282 Ann. Soc. ent. France **86**.

Palophus leopoldi **sp. n.** Congo p. 265, SCHOUTEDEN Rev. Zool. afric. **4** 1916. —*P. bayeri* **sp. n.** E. Africa p. 109, SCHOUTEDEN Rev. zool. afric. **5**.

MANTIDAE.

Corrections ot the catalogue of Mantidae, GIGLIO-TOS pp 139–163 Bull. Soc. ent. ital. **48**.

Oviposition, hatching, and ootheca, ADAIR Bull. Soc. ent. Egypte **1912** p. 117–127, **6** p. 21–36, **7** p. 90–99, **9** pp 81–91.

Acromantis javana p. 4, *moultoni* Borneo p. 5, *insularis*, *siporana*, p. 6, Sumatra, *indica westwoodi* Borneo, *montana* Java, *gestri* Sumatra, p. 7, **spp. n.**, GIGLIO-TOS Boll. Mus. Torino **30** No. 702 1915.

Alalomantis **gen. n.** p. 62 type *Hierodula muta* W.-M., GIGLIO-TOS Bull. Soc. ent. ital. **48**.

Ameles aegyptiaca, development, ADAIR & ADAIR pp. 81–91 Bull. Soc. ent. Egypte **9**.

Anallacta andreinii **sp. n** Eritrea p. 131, GIGLIO-TOS Bull. Soc. ent. ital. **48**.

Anasigerpes **gen. n.**, *bifasciata*, p. 14, *trifasciata*, *modesta*, p. 15, **spp. n.**, Africa, GIGLIO-TOS Boll. Mus. Torino **30** No. 702, 1915.

Anaxarcha limbata **sp. n.** Borneo, GIGLIO-TOS p. 1 T.c.

Antistia St., GIGLIO-TOS p. 90 Bull. Soc. ent. ital. **48**.

Archimantis minor **sp. n.** W. Australia p. 43, GIGLIO-TOS T.c.

Ariusia conspersa = (*Charieisilla cara* G.-T.), GIGLIO-TOS p. 91 T.c.

Auromantis **gen. n.** p. 55 type *limbata* Hahn, *cinctipes* **sp. n.** Costa Rica p. 56, GIGLIO-TOS T.c.

Bisanthe modesta **sp. n.** Zambesi p. 58, GIGLIO-TOS T.c.

Blepharopsis nuda **sp. n.** Africa & Aden p. 79 GIGLIO-TOS T.c.

Calidomantis aurea p. 48, *andreinii*, *fallax*, *vitrea*, p. 49, *moerana*, *milmilena*, p. 50, *alata*, *togana*, p. 51, *pygmaea*, *tenuis*, p. 52, **spp. n.**, Africa, GIGLIO-TOS T.c.

Calospilota **gen. n.** near *Plistospilota*, *guineensis* **sp. n.**, GIGLIO-TOS T.c.

Camelomantis **gen. n.** type *Hierodula giraffa* G.-T., *sumatrana*, p. 66, *moultoni* Borneo, *gracillima*, *penangica*, p. 67, **spp. n.**, GIGLIO-TOS T.c.

Cataspilota **gen. n.** p 59 for part of *Plistospilota*, GIGLIO-TOS T.c.

Coenomantis **gen. n.** p. 45 for *Pseudomantis kraussiana* Sauss., GIGLIO-TOS T.c.

Coptopteryx fallax sp. n. Paraguay p. 77, Giglio-Tos T.c.

Danuria congica sp. n. p. 71, *obscuripennis* Chop. = (*fusca* G.-T.) p. 72, Giglio-Tos T.c.

Deroplatys moultoni sp. n. Sarawak p. 108, Giglio-Tos T.c.

Empusa aegyptiaca sp. n. p. 69, Giglio-Tos T.c.—*E. egena*, life-history, Adair Bull. Soc. ent. Egypte 7 1916.

Eremiaphila werneri Khartoum, *sacra* Jerusalem, *nova* Eritrea, p. 80, *cairina* Cairo p. 81, spp. n., Giglio-Tos Bull. Soc. ent. ital. 48.—*E. khamsin*, ootheca, Andres pp. 72–74 Bull. Soc. ent. Egypte 6.

Galepsus nimulensis p. 101, *trilobus* p. 102, spp. n., Africa, Giglio-Tos Bull. Soc. ent. ital. 48.

Heliomantis gen. n. for *Polyspilota elegans* Nav., Giglio-Tos Boll. Mus. Torino 30 No. 702 p. 2 1915.

Hierodula striata Perak p. 64, *cuchingina* Borneo, *ralumina* Duke York isld., *H.* (*Rhombodera*) *rotunda* Borneo, p. 65, spp. n., Giglio-Tos Bull. Soc. ent. ital. 48.

Humbertiella affinis Ceylon, *similis* Nepal, spp. n., p. 83, Giglio-Tos T.c.

Isomantis gen. n. p. 54 type *Stagmomantis domingensis*, Giglio-Tos T.c. 1915

Macrodanuria; the 3 spp. are really one, Giglio-Tos p. 72 T.c.

Metallyticus pallipes p. 78, *fallax* p. 79, spp. n., Borneo, Giglio-Tos T.c.

Miobantia gen. n. p. 73, *aptera* sp. n. Brazil p. 74, Giglio-Tos T.c. 1915

Musoniola gen. n. p. 74 type *Mionyx dohrnianus* S. & Z., *vicina* sp.n. Nicaragua p. 76, Giglio-Tos T.c. 1915

Oligomantis gen. n. p. 3, *orientalis* Sumatra, *mentaweiana*, p. 4, spp. n., Giglio-Tos Boll. Mus. Torino 30 No. 702, 1915.

Oromantis gen. n. p. 56 type *Stagmomantis natura* Sauss., Giglio-Tos Bull. Soc. ent. ital. 48.

Orthodera australiana, *gracilis*, spp. n., Australia, p. 107, Giglio-Tos T.c.

Oxyelaea gen. n. near *Humbertiella*, *elegans* sp. n. E. Africa, Giglio-Tos p. 82 T.c.

Oxyophthalmellus gen. n. p. 102 type *Oxyophthalmus somalicus* Rehn., Giglio-Tos T.c.

Paroxyophthalmus nigericus sp. n. p. 104, Giglio-Tos T.c.

Phlaebarodes gen. n. p. 71 for *Blepharodes sudanensis* Werner, Giglio-Tos T.c.

Phyllothelys decipiens sp. n. Bombay, Giglio-Tos Boll. Mus. Torino 30 No. 702 p. 10 1915.

Plistospilota maxima, *mabirica*, *nigerica*, p. 61, *camerunensis*, *congica*, p. 62, spp. n. Africa, Giglio-Tos Bull. Soc. ent. ital. 48.

Pnigomantis gen. n. for *Sphodropoda mediocostricta*, Giglio-Tos p. 64 T.c.

Popa crassa sp. n. Nyassa p. 73, Giglio-Tos T.c.

Promiopteryx punctata sp. n. Paraguay p. 76, Giglio-Tos T.c.

Psychomantis gen. n. for *M. borneensis* Haan, Giglio-Tos Boll. Mus. Torino 30 No. 702 p. 2 1915.

Pyrgomantis occidentalis, *nigerica*, *congica*, p. 105, *fasciata*, *rhodesica*, *pallida*, p. 106, spp. n. Africa, Giglio-Tos Bull. Soc. ent. ital. 48.

Rheomantis gen. n. p. 44 for *Fischeria quinquelobata* Tepp., Giglio-Tos T.c.

Rhodomantis gen. n. p. 45 for *Pseudomantis pulchellus* Tepp., Giglio-Tos T.c.

Rhomantis gen. n. p. 2, *moultoni* sp. n. Borneo p. 3, Giglio-Tos Boll. Mus. Torino 30 No. 702, 1915.

Sigerpes niloticus, *congicus*, p. 12, *toganus*, *camerunensis*, *nigericus*, p. 13, spp. n., Africa, Giglio-Tos T.c.

Sphodromantis aurea, *citernii*, spp. n., Africa p. 63, Giglio-Tos Bull. Soc. ent. ital. 48.—*S. bioculata*, development, Adair Bull. Soc. ent. Egypte 7 1916 pp. 90–99.

Stagmomantis nordica Virginia, *polita* Nicaragua, p. 53, *simplex* Mexico p. 54, spp. n., Giglio-Tos Bull. Soc. ent. ital. 48.

Stauromantis gen. n. p. 54 type *Stagmomantis rheophila* Rehn, *festae* sp. n. Guyaquil p. 55, GIGLIO-TOS T.c.

Tarachodella gen. n. p. 91, *monticola* sp. n. Cameroons p. 92, GIGLIO-TOS T.c.

Tarachodes monstrosus p. 97, *bandanus*, *sacer*, p. 98, *chopardii* p. 99, spp. n., Africa, GIGLIO-TOS Bull. Soc. ent. ital. 48.

Tarachodula gen. n. p. 92 type *Tarachodes pantherina* Gerst., *delica* sp. n. Somaliland p. 93, GIGLIO-TOS T.c.

Taumantis gen. n. p. 47 type *Calidomantis sigiana*, GIGLIO-TOS T.c.

Tauromantis gen. n. p. 57 type *Phasmomantis championi*, GIGLIO-TOS T.c.

Theomantis gen. n. for *Mantis ocellaria* Drury, GIGLIO-TOS Boll. Mus. Torino 30 No. 702 p. 16, 1915.

Theopompa borneana sp. n. Sarawak p. 85, GIGLIO-TOS Bull. Soc. ent. ital. 48.

Theopompella gen. n. p. 86 type *Humbertiella heterochroa* Gerst., *pallida* p. 87, *fusca* p. 88, *orientalis* p. 89, spp. n., Africa, GIGLIO-TOS T.c.

Theopompula gen. n. p. 84 for *Theopompa taprobanarum* W.-M., GIGLIO-TOS T.c.

Tisma gen. n. p. 68 for Madagascar *Stagmatoptera*, GIGLIO-TOS T.c.

Trachymantis gen. n., *obesa* sp. n., Africa, GIGLIO-TOS p. 46 T.c.

Uromantis gen. n. p. 56 type *Stagmomantis heterogamia* Sauss., *centralis*, *similis*, spp. n., Costa Rica, p. 57, GIGLIO-TOS T.c.

GRYLLIDAE AND GRYLLOBLATTIDAE.

Copulation of Gryllidae, OKAZAKI Konch. Sek. Gifu 21 pp. 401–410.

Grylloblattidae and *Embiidae*, CRAMPTON Canad. Ent. 49 pp. 213–217.

Gryllus katangensis sp. n. Congo p. 145 SJÖSTEDT Rev. zool. afric. 5.

Leptonemobius gen. n. p. 142, *variegatus* sp. n. Congo p. 143, SJÖSTEDT T.c.

Nemobius heydeni, habits, CHOPARD p. 237 Bull. Soc. ent. France 1917.

Scapsipedus vittifrons p. 150, *neavei* p. 151, spp. n. Congo, SJÖSTEDT Rev. zool. afric. 5.

LOCUSTIDAE OR PHASGONURIDAE OR TETTIGONIIDAE.

Cnemidophyllum gen. n. for *Posidippus lineatus* Br., REHN p. 118 Ent. News 28.

Coelophyllum = (*Prosagoga* Brunn.) p. 152, *amazonicum* p. 154, *costaricense* p. 156, *peruvianum* p. 159, spp. n., figs., pl. xii, REHN T.c.

Dolichopoda palpata synonymy p. 266, *euxina* sexes p. 267, CHOPARD Bull. Soc. ent. France 1917; Habits, CHOPARD p. 287 T.c.

Frontinus degeeri from Costa Rica, REHN p. 119 Ent. News 28.

Neanias testaceus var. n. *matsumurae* p. 239, *fusco-terminatus fruhstorferi* subsp. n. p. 247, GRIFFINI Wien. ent. Zeit. 33, 1914.

Steirodon, type and synonymy, REHN p. 114 Ent. News 28.

Steirodonopis bilobata, REHN p. 120 fig. T.c.

Stilpnochlora nec *Microcentrum*, species pp. 107–113, *quadrata* pl. x f. 6, REHN T.c.

ACRIDIIDAE (LOCUSTIDAE OF SOME WRITERS.)

Melanoplus and allies, critical list of mexican, *desuttorius insignis* subsp. n. p. 266 fig., HEBARD pp. 251–275 P. Ac. Philadelphia 1917.

Melanoplus differentialis var. n. *nigricans*, COCKERELL p. 247 Ent. Rec. 29.

Neotettix femoratus = (*bolivari* Hanc.), FOX p. 207 P. U. S. nat. Mus. 52.

Phaedrotettix litus sp. n. Mexico p. 258 fig., HEBARD P. Ac. Philadelphia 1917.

Schistocerca damnifica, colour dimorphism, CAUDELL p. 216 P. ent. Soc. Washington 18.

Zonocerus elegans, instars, RICH p. 2 Ent. News 28.

APTERA.

Sense Organs, HANSEN, Ent. Tidskr. **38** p. 240-259.

Nervous system, Thysanura, HILTON Ann. ent. Soc. Amer. **10** pp. 303-313.

THYSANURA s-l.

Allonychella **gen. n.** p. 334, *notabilis* p. 336 figs., *ruficauda* p. 337, figs., with var. *robustior* p. 339, **spp. n.** Africa, SILVESTRI Boll. Lab. Portici **12**.

Dionychella **gen. n.** p. 328, *titillans* **sp. n.** Africa p. 330, figs., SILVESTRI T.c.

Gastrotheus parvulus p. 324 figs., *afer* p. 325 figs., *brachyurus* p. 327 figs., **spp. n.** Africa, SILVESTRI T.c.

†*Lampropholis* (?) *burmiticus* **sp. n.** Burmese amber p. 360, COCKERELL Amer. J. Sci. **44**.

Monachtinella setosa **sp. n.** Africa p. 341, figs. SILVESTRI Boll. Lab. Portici **12**.

Pauronychella **gen. n.** p. 332, *cubitermina* **sp. n.** Africa p. 333, figs., SILVESTRI T.c.

Trichotriura **gen. n.** p. 343, *nigeriensis* **sp. n.** p. 345 figs., SILVESTRI T.c.

COLLEMBOLA.

Achorutes rosaceus p. 7 figs. 7–8, *cirratus* p. 8 figs. 9-10, **spp. n.** Queensland, SCHÖTT Ark. Zool. **11** No. 8.

Calobatinus **nom. n.** for *Calobatella* Börn., *rhadinopus* varr. n. *erythraea*, p. 319 figs., *occidentalis* p. 323 figs., SILVESTRI Boll. Lab. Portici **12**.

Coelura **gen. n.**, *articulata* **sp. n.** p. 25 pl. ii. fig. 1 text figs. 28-29, var. *semicolor* var. n. pl. ii. fig. 2 Australia, SCHÖTT Ark. Zool. **11** No. 8.

Cremastocephalus speciosus **sp. n.**, KINOSHITA Dobuts. Z. Tokyo **29** p. 73-76.

Cyphoderopsis **gen. n.** p. 566, *kempi* sp. n. Assam p. 567 pl. lvii. figs. 34-38, CARPENTER Rac. Ind. Mus. **8**.

Cyphoderus pseudalbinus p. 50 fig. 51, *serratus* p. 52, figs. 52-53, **spp. n.** Queensland, SCHÖTT Ark. Zool. **11** No. 8.—*C. hozawai* **sp. n.** Japan, KINOSHITA Dobuts. Z. Tokyo **29** p. 40-46.—*C. arcuatus* varr. n. *holonycha*, p. 313 fig., *brevimucronata* p. 314 figs., and *squamidives* p. 315 figs., SILVESTRI Boll. Lab. Portici **12**.

Entomobrya varia, p. 11 pl. i. figs. 1-5, *termitophila* p. 12 pl. i. fig. 6, *lamingtonensis* p. 13, *virgata* p. 13 fig. 15, *tenuicauda* p. 14 fig. 16, *ambigua* p. 15, *cocruleopicta* p. 15 figs. 17-19, *albococrulae* p. 18 figs. 20-22, *cobaltina* p. 18, **spp. n.**, Australia, SCHÖTT Ark. Zool. **11** No. 8.

Folsomia dubia **sp. n.**, KINOSHITA Dobuts. Z. Tokyo **29** pp. 73-76.

Hypeogastrura viatica, habits, WAHLGREN Fauna och Flora Uppsala **1916** pp. 114-118.

Isotoma tridentifera **sp. n.** Queensland, SCHÖTT Ark. Zool. **11** No. 8 p. 9 figs. 1114.

Katianna oceanica **sp. n.** Queensland, SCHÖTT p. 57 pl. iv. figs. 6-10 T.c.

Lepidocyrtoides longicornis p. 38 pl. iii. fig. 6 and text figs. 42-43, *cucullaris* p. 39 pl. iii. fig. 3, *australicus* p. 40 pl. 3 fig. 1, *flavocinctus* p. 42 text fig. 44, *sagmarius* p. 43 text figs. 45-46, *coeruleus* p. 45, *cinctus* p. 45, *angulatus* p. 45 pl. iii. fig. 5 and text figs. 47-48, *spinosus* p. 47 pl. iii fig. 4 text figs. 49-50, **spp. n.**, *australicus* var. *tamburinensis* var. n. p. 41 pl. iii. fig. 2, Queensland, SCHÖTT T.c.

Lepidocyrtus caudatus **sp. n.** Burma p. 563, figs. 10-12 pl. lv., CARPENTER Rec. Ind. Mus. **8**.—*L. praecisus* **sp. n.** Queensland, SCHÖTT Ark. Zool. **11** No. 8 p. 37 figs. 40-41.

Onychiurus similis p. 640, *subtenuis* p. 642, *litoreus* p. 644, *pseudarmatus* p. 646, *ramosus* p. 648, *pseudofimetarius* p. 650, **spp. n.** U. S. figs. pls. 68-79, FOLSOM P. U. S. nat. Mus. **53**.

Paronella crassicornis p. 564 pl. lvi figs. 13-23, *flava* figs. 24-27, *elongata* pl. lvii figs. 28-23, **spp. n.** Burma, CARPENTER Rec. Ind. Mus. **8**.—*P. japonica* **sp. n.**, KINOSHITA Dobuts. Z. Tokyo **29** pp. 40-46.—*P. queenslandica*, p. 26 pl. i. figs. 3-4 and text figs 30-32, *appendiculata* p. 29 pl. ii fig and text figs. 32-35, **spp. n.** Queensland, SCHÖTT Ark. Zool. **11** No. 8.

Pericrypta mjoebergi **sp. n.** Queensland, SCHÖTT p. 23 figs. 26-27 T.c.

Protonura spinifera **sp. n.** India p. 562 pl. lv, CARPENTER Rec. Ind. Mus. **8.**

Pseudachorutes incertus sp. n. Queensland, SCHÖTT Ark. Zool. **11** No. 8 p. 3 figs. 1-3.

Pseudocyphoderus squamicauda **sp. n.** W. Africa p. 317 figs., SILVESTRI Boll. Lab. Portici **12.**

Sinella termitum **sp. n.** Queensland, SCHÖTT Ark. Zool. **11** No. 8 p. 20 figs. 23-25.

Sira abrupta p. 30 fig. 36, *tricincta* p. 31 fig. 37, **spp. n.** Queensland, SCHÖTT T.c.

Sminthurinus oculatus p. 53 pl. iv figs. 1-4 text fig. 54, *nigrescens* p. 54 text figs. 53-57, *tricolor* p. 54 pl. iv fig. 5, **spp. n.** Queensland, SCHÖTT T.c.

Sminthurus viridis var. *medicaginis* var. n. Australia, SCHÖTT p. 58 pl. iv figs. 11-12 T.c.

Willowsia **gen. n.** type *Sira nigromaculata* Lubb., SHOEBOTHAM p. 492 Ann. Nat. hist. **19.**

PROTURA.

Protura; BAGNALL pp. 65-73 Vasculum **3**; *Anamerentoma* for the Order Protura, ID. T.c. p. 70.

XIII. PROCHORDATA

INCLUDING

ENTEROPNEUSTA AND PTEROBRANCHIA

BY

C. TATE REGAN, F.R.S.

CONTENTS

PAGE

I. TITLES 2

II. SYSTEMATIC INDEX :—

Tunicata 2

Cephalochordata 2

Enteropneusta and Pterobranchia (vacant)

I.—TITLES.

Goodrich, E. S. "Proboscis pores" in craniate vertebrates, a suggestion concerning the premandibular somites and hypophysis. Q. J. Microsc. Sci. London **62** 1917 (539–553) pl. xxviii. **1**

Hartmeyer, R. Ascidier. A conspectus of the Ascidians of Greenland. København Medd. Grønl. **23** 1917 (1081–1117). **2**

Salensky, W. W. *Salpa bicaudata* Petrograd Bull. Acad. Sci. **1917** (219–240 623–644 1113–1140). [Russ.] **3**

Selys-Longchamps, M. de. Sur le Bourgeonnement des Polystyélinés *Stolonica* et *Heterocarpa*, avec quelques notes sur l'anatomie de ces deux genres. Bull. Sci. France Belgique Paris **50** 1917 (170–276). **4**

Smith, K. M. and **Newth,** H. G. A Note concerning the collar cavities of the larval *Amphioxus*. Q. J. Miscrosc. Sci. London **62** 1917 (243–251) pl. xviii. **5**

II.—SYSTEMATIC INDEX.

Tunicata.

Of Greenland, Hartmeyer **2**.

Heterocarpa and *Stolonica*, structure, budding, Selys-Longchamp **4**.

Salpa bicaudata, Salensky **3**.

Cephalochordata.

Amphioxus, ciliated pit, Goodrich **1**; collar cavities, Smith and Newth **5**.

XIV. VERTEBRATA

(GENERAL)

i.e., complementary to Mammalia, Aves, Reptilia, and Pisces

BY

D. SHARP,

CONTENTS

PAGE

I. TITLES 2

II. SUBJECT INDEX :—

Structure = 5207 3

Development = 5215 3

Ethology = 5219 3

Variation and Evolution = 5223 3

Geography = 5227 3

I.—TITLES.

Allis, E. P. The lips and the nasal apertures in the gnathostome fishes, and their homologues in the higher vertebrates. Proc. nation. Ac. Washington **3** 1917 (73–78). **1**

Anthony, R. Seconde note sur un procédé d'étude de l'architecture du tissu spongieux des os. Bull. Mus. Paris **1916** 1917 (287–288) pl. vi. **2**

Ariens Kappers, C. U. Verschynselen van neurobiotaxis in het optische stelsel. [Erscheinungen von Neurobiotaxis im optischen system.] Psychiatrische Neurologische Bladen Amsterdam **1917** (320–365) 10 taf. **3**

Ariens Kappers, C. U. Iets over de phylogenese van de gleine hersenen. [Etwas über die Phylogenese des Kleinhirns.] Amsterdam Werk. Gen. Nat. Genees. Heelk. **8** 1917 (639–641), Nederlandsch Tydschrift Geneeskunde, Amsterdam **61** 1 1917 (953–955). **3a**

Barge, J. A. J. Probleme im Kranio-Vertebralgebiete. Amsterdam, Verh. K. Akad. Wet. 2e. Sect. **20** No. 2 1918 (1–105) 44 Textfig. **3b**

Brimley, C. S. Some known changes in the land vertebrate fauna of North Carolina. J. Elisha Mitchell Soc. **32** 1917 (177–183). **4**

Cameron, J. The histogenesis of vertebrate striated muscle, including a contribution of our knowledge regarding the structure and functions of the cell-nucleus. Trans. R. Soc. Canada **11** 1917 Sect. 4 (81–98) pls. **5**

Cope, E. D. and **Matthew,** W. D. Hitherto unpublished plates of tertiary mammalia and permian vertebrata prepared under the direction of Edward Drinket Cope with descriptions of plates by William Diller Matthew. U.S. Geol. Surv. Amer. Mus. N.H. Mon. No. **2** 1915 154 pls. **6**

Coward, T. A. Notes on the vertebrate fauna of Cheshire and South Lancashire. Lancash. Nat. Darwen **9** 1917 (Suppl. 1–40) and **10** 1917 (185–192) &c. **7**

Delsman, H. C. Korte geschiedenis van den kop der gewervelde dieren. [Short history of the head of vertebrates.] Amsterdam Versl. Wis. Nat. Afd. K. Akad. Wet. **26** 1918 (1018–1033) 1 pl. (Dutch); Amsterdam Proc. Sci. K. Akad. Wet. **20** 1918 (1005–1020) 1 pl. (English). **8**

Delsman, H. C. Over de betrekking tusschen anus en blastoporus en over het ontstaan van den staart der gewervelde dieren. [On the relation of the anus to blastopore and on the origin of the tail in vertebrates.] Amsterdam Versl. Wis. Nat. Afd. K. Akad. Wet **25** 1917 (1146–1167) 1 pl. (Dutch); Amsterdam Proc. Sci. K. Akad. Wet. **19** 1917 (1256–1275) pl. **8a**

Dice, L. R. Distribution of the land vertebrates of South-Eastern Washington. Berkeley Univ. Calif. Publ. Zool. **16** No. 17 1916 (293–342) pls. xxiv.–xxvi. **8b**

Foote, J. S. A contribution to the comparative histology of the femur. Smithson. Contr. **35** No. 3 1916 (1–242) pls. i–xxxv. **9**

Goodrich, E. S. "Proboscis pores" in craniate vertebrates, a suggestion concerning the premandibular somites and hypophysis. Q. J. Microsc. Sci. London **62** 1917 (539–553) pl. xxviii. **10**

Gregory, W. K. Evolution of the human face. Amer. Mus. J. New York **17** 1917 (377–388). **11**

Hay, D. P. On a collection of fossil vertebrates made by Dr. F. W. Cragin from the *Equus* beds of Kansas. Sci. Bull. Kansas Univ. **10** 1917 (39–51) 3 pls. **12**

Jordan, H. E. Aortic cell clusters in vertebrate embryos. Proc. nation. Ac. Washington **3** 1917 (149–156). **13**

Kingsley, J. S. Outlines of comparative anatomy of vertebrates. Second edition, revised, Philadelphia. no date (x + 449) 406 figs. **13a**

Kooy, F. H. The inferior olive in vertebrates. Folia neuro-biologica Haarlem **10** 1917 (205–369 101 fig.); Haarlem 1916 (F. Bohn) **14** (165) 101 fig. 25 cm.

Lubsen, N. J. Dyspierstelsel en plexus lumbosa cralis. [Schenkelmuskelsystem und plexus lumbosacralis. Amsterdam (J. H. de Bussy) **1918** (232) 5 Taf. 24 cm. **15**

Matthew, W. D. *vide* Cope and Matthew.

Rabaud, E. La simulation de la mort chez les vertébrés. Bull. Soc. Zool. France **41** 1916 (117–124). **16**

Resing, A. J. De generatiecyclus by de vertebraten. [Cycle de la génération chez les vertébrés.] Helder Tydschr. Ned. Dierk. Ver. **15** (Ser. 2) 1917 (xxiv–xxxviii). **17**

Roosevelt, T. Through the Brazilian wilderness. New York (Scribner) **1914** (xiv + 1*l* + 383) pls. maps. 24 cm. **18**

Tilney, F. The morphology of the diencephalic floor. J. Comp. Neurol. Philadelphia **25** 1915 (213–282) figs. **18a**

Vermeulen, H. A. Over glandulae parathyroldeae (Epitheellichaampjes). [Ueber glandulae parathyroideae (Epithelkörperchen)]. Tydschr. Diergen. Utrecht **44** 1917 (155–164) 2 Taf. **19**

Watson, D. M. S. The evolution of the tetrapod shoulder girdle and forelimb. J. anat. London **52** 1917 (1–63). **19a**

Watt, H. J. The typical form of the cochlea and its variations. London Proc. R. Soc. B. **89** 1917 (410–421). **20**

Wyhe, J. W. **van.** Over den nervus terminalis van den mensch tot Amphioxus. [On the nervus terminalis from man to Amphioxus.] Amsterdam Versl. Wis. Nat. Afd. K. Akad. Wet. **26** 1918 (1517–1528) pl. (Dutch); Amsterdam Proc. Sci. K. Acad. Wet. **21** 1918 (172–182) pl. (English). **21**

II.—SUBJECT INDEX.

STRUCTURE. 5207

General.

Allis, 1; Goodrich, 10; Kingsley, 13a.

Histology.

Foote, 9.

Skeleton.

Anthony, 2; Delsman, 8; Foote, 9; Tilney, 18a; Watson, 19a.

Nervous System and Sense-organs.

Ariens Kappers, 3, 3a; Barge, 3b; Kooy, 14; Lubsen, 15; Watt, Cochlea, **20; Wyhe, 21.**

Myology.

Cameron, 5; Lubsen, 15.

Glands.

Vermeulen, 19.

DEVELOPMENT. 5215

Cameron, 5; Delsman 15; Jordan, 13; Resing, 17.

ETHOLOGY. 5219

Rabaud, 16; Roosevelt, 18.

AETIOLOGY. 5223

Delsman, 8; Gregory, 11.

GEOGRAPHY. 5227

England, **Coward, 7.**

North America, **Brimley, 4; Cope** and **Matthew, 6; Dice, 8b; Hay, 12.**

Brazil, **Roosevelt, 18.**

XV. PISCES

BY

C. TATE REGAN, F.R.S.

CONTENTS

	PAGE
I. Titles	3
II. Subject Index	9
General	9
Economics	9
Structure	10
Physiology	10
Development	10
Ethology	10
Variation and Evolution	10
Distribution	10
Marine	10
Fresh Water	11
Fossil	11
III. Systematic	11
General Works	11
Marsipobranchii	11
Selachii	11
Ichthyodorulites	11
Pleuropterygii	11
Euselachii	11
Pleurotremata	11
Hypotremata	12
Holocephali	12

PAGE

Pisces 12
Palaeopterygii 12
Neopterygii 12
Protospondyli 12
Isospondyli 12
Ostariophysi 13
Apodes 15
Microcyprini 16
Synentognathi 16
Anacanthini 16
Allotriognathi 16
Solenichthyes 16
Percomorphi 16
Scleroparei 18
Heterosomata 18
Plectognathi 18
Symbranchii 19
Xenopterygii 19
Pediculati 19
Heterostraci... 19

I.—TITLES.

Allen, E. J. Post-larval Teleosteans collected near Plymouth during the summer of 1914. Plymouth J. Mar. Biol. Ass. **11** 1917 (207–250). **1**

Allen, E. J. The age of Fishes and the rate at which they grow. Plymouth J. Mar. Biol. Ass. **11** 1917 (399–424). **2**

Allen, E. J. Food from the sea. Plymouth J. Mar. Biol. Ass. **11** 1917 (380–398). **3**

Allis, E. P. The prechordal portion of the chondrocranium of *Chimaera colliei.* London Proc. Zool. Soc. **1917** (105–143) 3 pls. **4**

Allis, E. P. The homologies of the muscles related to the visceral arches of the Gnathostome Fishes. Q. J. Microsc. Sci. London **62** 1917 (303–406) pls. xxi.–xxii. **5**

Allis, E. P. The lips and the nasal apertures in the Gnathostome Fishes and their homologies in the higher Vertebrates. Washington Proc. Acad. Sci. **3** 1917 (73–78). **6**

Amemiya, I. Ueber das Teleskopauge des Goldfisches. Tokyo J. Coll. Agric. **6** 1917 (245–259) 1 pl. **7**

Andersson, E. Beschreibung einiger Fischreste aus Madagascar und Siam. Upsala Bull. Geol. Inst. **13** 1916 (227–231) 2 pls. **8**

Andersson, K. A. Undersökningar rörande det bohuslänska sillfisket. Sv. Fisk. Tidskr. Uppsala **25** 1916 (44–54). **9**

Anthony, R. Sur la circulation embryonnaire primitive des Poissons Téléostéens (étude de l'embryon de l'Épinoche, *Gastrosteus gymnurus* Cuv.). Paris C. R. Acad. Sci. **165** 1917 (474–476). **10**

Ballowitz, E. Ueber die Vereinigung der Rotzellen mit Guaninzellen in der Haut von *Mullus* und *Crenilabrus.* Arch. Zellforschg. Leipzig **1916** (4 pp.) 1 pl. **11**

Ballowitz, E. Zur Kenntnis der Gelbzellen, Xanthophoren, in der Haut von *Blennius.* Arch. Zellforschg. Leipzig **1916** (4 pp.) 1 pl.

Ballowitz, E. Ueber die kornige Zusammensetzung des Verbindungsstückes des Samenkörper der Knochenfische. Arch. Zellforschg. Leipzig **1916** (4 pp.) 1 pl. **13**

Bamber, R. C. Note on a hermaphrodite Dogfish. London Proc. Zool. Soc. **1917** (217–219). 2 pls. **14**

Bensley, B. A. The Fishes of Georgian Bay. Ottawa Rep. Fish. Dep. Mar. Can. **47** Suppl. (1–52) 2 pls. 1915. **15**

Berry, E. W. A Sail Fish from the Virginia Miocene. Amer. J. Sci. New Haven Conn. **43** 1917 (461–464). **16**

Björck, W. Nyare forskningar over van dringsfiskarnes biologi. Pop. naturv. Revy Stockholm **6** 1916 (71–82). **17**

Blegvad, H. Om Fiskenes Føde i de danske Farvande indenfor Skagen. The food of the fishes in the waters inside Skagen. København Ber. Biol. Stat. **24** 1917 (17–72) 1 map and 6 tables. **18**

Boulenger, G. A. Sur des tubercules nuptiaux simulant des dents chez un Poisson africain du genre *Barbus.* Paris C. R. Acad. Sci. **164** 1917 (298–300). **19**

Boulenger, G. A. Sur certaines catégories à établir parmi les Poissons habitant les eaux douces. Paris C. R. Acad. Sci. **165** 1917 (327–330). **20**

Boulenger, G. A Sur l'origine marine du genre *Salmo.* Paris C. R. Acad. Sci. **165** 1917 (721–724). **21**

Boulenger, G. A. Descriptions of new Fishes from Lake Tanganyika, forming part of the Collection made by the late Dr. L. Stappers for the Belgian Government. Ann. Mag. Nat. Hist. London ser. 8 **20** 1917 (363–368). **22**

Boulenger, G. A. Description of a new Silurid Fish from Natal. Ann. Durban Mus. **1** Pt. 4 1917 (432). **23**

Boulenger, G. A. Diagnoses de poissons nouveaux. II. Mormyrides, Kneriides, Characinides, Cyprinides, Silurides. Bruxelles Rev. Zool. Africaine **4** (162–171) 1915. **24**

Bounhiol, J. P. Le dimorphisme sexuel chez la Sardine (*Alosa sardina* L.) der côtes d'Algérie. Paris C. R. Soc. Biol. **1917** (77–80). **25**

Bounhiol, J. P. Sur la distribution verticale des bancs de sardines dans les eaux littorales de l'Algérie. Paris C. R. Soc. Biol. **1917** (476–479). **26**

Bounhiol, J. P. Sur la biologie de l'Alose finte (*Alosa finta* Cuv.) des côtes d'Algérie. Paris C. R. Soc. Biol. **1917** (480–483). **27**

Boutan, L. Sur le rôle des nageoires dans les Poissons téléostéens à vessie natatoire. Paris C. R. Acad. Sci. **165** 1917 (801–803). **28**

Camp, W. E. The development of the suprapericardial (postbranchial, ultimobranchial) body in *Squalus acanthias.* J. Morph. Boston Mass. **28** 1917 (369–415). **29**

Chaudhuri, B. L. Fauna of the Chilka Lake. Fish. Part III. Mem. Ind. Mus. Calcutta **5** 1917 (491–508). **30**

Conel, J. L. R. The Urogenital System of Myxinoids. J. Morph. Boston Mass. **29** 1917 (75–163). **31**

Craigie, E. H. The life-history of the Hake (*Urophycis chuss*) as determined from its scales. Ottawa Rep. Dep. Fish. **1916** Suppl. (87–94). **32**

Dahlgren, U. Structure and polarity of the electric motor nerve-cell in Torpedoes. Washington Carnegie Inst. Pap. Tortugas Lab. **8** 1915 (213–256) 6 pls. **33**

Danforth, C. H. The Relation of Coronary and Hepatic Arteries in the Common Ganoids. Amer. J. Anat. Philadelphia **19** 1916 (391–400). **34**

Daniel, J. F. The anatomy of *Heptanchus maculatus.* Berkeley Univ. Cal. Pub. Zool. **16** 1916 (349–370) pls. xxvii–xxix. **35**

Dean, B. and **Eastman,** C. R. A Bibliography of Fishes. N. York Amer. Mus. 2 vols. 1916–17. **36**

Droogleever Fortuyn-van Leyden, C. E. Over een aal met het linkeroog in de onderkaak. [On an eel, having its left eye in the lower jaw.] Amsterdam Versl. Wis. Nat. Afd. K. Akad. Wet. **25** 1917 (1168–1170) (Dutch); Amsterdam Proc. Sci. K. Akad. Wet. **19** 1917 (1120–1122) (English). **37**

Duff, D. Investigation of the Haddock Fishery, with special reference to the growth and maturity of the Haddock. Ottawa Rep. Dep. Fish. **1916** Suppl. (95–101). **38**

Eastman, C. R. Fossil Fishes in the collection of the United States National Museum. Washington Proc. U.S. Nation. Mus. **52** 1917 (235–304) pls. i–xxiii. **39**

Eastman, C. R. Olden Time knowledge of *Hippocampus.* Washington Smithsonian Inst. Rep. **1915** (349–357) 4 pls. 1916. **40**

Eastman, C. R. *vide* Dean, B.

Eigenmann, C. H. The Homes of Blindfishes. Geogr. Rev. N. York **4** 1917 (171–182). **41**

Eigenmann, C. H. New and rare species of South American Siluridae in the Carnegie Museum. Pittsburg Ann. Carnegie Mus. **11** 1917 (398–404) pls. xxxix–xli. **42**

Eigenmann, C. H. *Pimelodella* and *Typhlobagrus.* Pittsburg Mem. Carnegie Mus. **7** No. 4 1917 (229–258) pls. xxix–xxxv. **43**

Eigenmann, C. H. The American Characidae. Cambridge Mass. Mem. Mus. Comp. Zool. **43** Pt. 1 1917 (102 pp.) pls. i–xvi xcv–ci. **44**

Eigenmann, C. H. Eighteen new species of Fishes from Northwestern South America. Philadelphia Proc. Amer. Phil. Soc. **56** 1917 (673–689). **45**

Eigenmann, C. H. Descriptions of sixteen new species of Pygidiidae. Philadelphia Proc. Amer. Phil. Soc. **56** 1917 (690–703). **46**

Eigenmann, C. H. and **Fisher,** H. G. On some species of *Rhamdia,* a genus of South American Siluridae, in the Carnegie Museum. Pittsburg Ann. Carnegie Mus. **11** (394–397) pl. xxxviii. **47**

Eigenmann, C. H. and **Vance,** L. Some species of Farlowella. Pittsburg Ann. Carnegie Mus. **11** 1917 (297–303). **48**

Ekman, S. Om Vätterus näbbsik. Sv. Fisk. Tidskr. Uppsala **25** 1916 (101–107). **49**

Ekman, S. Om hornsimpans förekomst i Vänern. Sv. Fisk. Tidskr. Uppsala **25** 1916 (180–182). **50**

Evermann, B. W. *vide* Jordan, D. S.

Evermann, B. W. and **Hildebrand,** S. F. Notes on the Fishes of East Tennessee. Washington Bull. Bur. Fish. **34** 1914 [1916] (431–451). **51**

Evermann, B. W. and **Radcliffe,** L. The Fishes of the West Coast of Peru and the Titicaca Basin. Washington Bull. U.S. Nation. Mus. **95** 1917 (166 pp.) 14 pls. **52**

Festa, E. Un caso di icterismo nel *Barbus plebejus* Val. Boll. Mus. Zool. Anat. Comp. Torino **30** 1915 No. 696 2 pp. **53**

Fisher, H. G. A list of the Hypophthalmidae, the Diplomystidae and of some unrecorded species of Siluridae in the collections of the Carnegie Museum. Pittsburg Ann. Carnegie Mus. **11** 1917 (405–427) pl. xlii. **54**

Fisher, H. G. *vide* Eigenmann, C. H.

Fowler, H. W. A second collection of Fishes from the Panama Canal Zone. Philadelphia Proc. Acad. Nat. Sci. **69** 1917 (127–136). **55**

Fraser, C. M. On the scales of the Spring Salmon. Ottawa Rep. Dep. Fish. **1917** Suppl. (21–38). **56**

Fraser, C. M. On the life-history of the Coho. Canada Rep. Fish Dep. **1917** Suppl. (39–46) pls. v–vii. **57**

Gilbert, C. H. On the Occurrence of *Benthodesmus atlanticus* Goode and Bean on the Coast of British Columbia. Washington Smithsonian Inst. Misc. Coll. **66** No. 18 1917 (2 pp.). **58**

Gilbert, C. H. and **Hubbs,** C. L. Description of *Hymenocephalus tenuis,* a new Macruroid Fish from the Hawaiian Islands. Washington Proc. U.S. Nation. Mus. **54** 1917 (173–175). **59**

Gilchrist, J. D.F. Note on protective resemblance etc. in post-larval stages of some Cape Fishes. Cape Town Tr. Roy. Soc. S. Afric. **6** 1917 (205–208). **60**

Gilchrist J. D. F. Marine Biological Report No. 2. Cape Town 1914 (167 pp.). **61**

Gilchrist, J. D. F. and **Thompson,** W. Marine Biological Report No. 3. 1916 Cape Town. **62**

Gilchrist, J. D. F. and **Thompson,** W. W. A catalogue of the Sea Fishes recorded from Natal. Part II. Ann. Durban Mus. **1** (291–431) 1917. **63**

Gilchrist, J. D. F. and **Thompson,** W. W. The Freshwater Fishes of South Africa (continued). Ann. S. Afric. Mus. **11** (465–575) 1 pl. **64**

Ginsburg, T. On two species of Fishes from the Yalu River, China. Washington Proc. U. S. Nation. Mus. **54** 1917 (99–101). **65**

Griscom, L. *vide* Nichols, J. T.

Gueylard, F. et **Portier,** P. Variations de poids de l'Épinoche morte (*Gast. liurus*) sous l'influence des changements brusques de salinité. Paris C. R. Soc. Biol. **1917** (683–684). **66**

Gueylard, F. et **Portier,** P. Variation de poids de l'Épinoche passant d'un milieu dans un autre de salinité différente. Paris C. R. Soc. Biol. 1917 (538–540). **67**

Heitz, F. A. *Salmo salar* L. seine Parasitenfauna und seine Ernährung im Meer und im Süsswasser. Stuttgart 1917 (138 pp.) 1 pl. **68**

Henschen, S. E. Om en ögonåkomma (Keratitis exulcerans et perforans, traumatica) hos hajar och rockor i fångenskap. [Über eine Augenkrankheit (Keratitis exulcerans et perforans traumatica) bei Haifischen und Röcken in Gefangenschaft.] Stockholm Sv. Läkares. Handl. **42** 1916 (971–979 deutsches Res. 978–979). **69**

Herdman, W. A. Report on the investigations carried on during 1916 in connection with the Lancashire Sea-Fisheries Laboratory, at the University of Liverpool, and at the Sea-Fish Hatchery at Piel, near Barrow. Liverpool Proc. and Trans. Biol. Soc. **31** 1917. **69a**

Hildebrand, S. F. *vide* Evermann, B. W.

Horst, C. J. **van der.** De voorhersenen der Synbranchidae. [The fore-brain of Synbranchidae.] Amsterdam Versl. Wis. Nat. Afd. K. Akad. Wet. **26** 1917 (17–29) (Dutch); Amsterdam Proc. Sci. K. Akad. Wet. **20** 1917 (217–228) (English). **70**

Hoskins, E. R. On the development of the digitiform gland and the postvalvular segment of the intestine in *Squalus acanthias.* J. Morph. Boston Mass. **28** 1917 (329–360) 3 pls. **71**

Hubbs, C. L. Colpichthys, Thyrinops and Austromenidia, New Genera of Atherinoid Fishes from the New World. Philadelphia Proc. Acad. Sci. **1917** (305–308). **72**

Hubbs, C. L. *vide* Gilbert, C. H.

Hubbs, C. L. *vide* Jordan, D. S.

Huntsman, A. G. The Lampreys of Eastern Canada. Ottawa Nat. **31** 1917 (23–27). **73**

Hussakof, L. Fossil Fishes collected by the American Museum Congo Expedition. N. York Bull. Amer. Mus. Nat. Hist. **37** 1917 (761–767) pl. lxxxviii. **74**

Hutton, J. A. Wye Salmon. Results of scale reading, 1908–1916. Salmon and Trout Magazine London April **1917.** **75**

Jespersen, P. Contributions to the life-history of the North Atlantic Halibut (*Hippoglossus vulgaris* Flem.). Kjöbenhavn Medd. Havunders Ser. Fiskeri **5** No. 5 1917 (32 pp.) 1 pl. **76**

Johansen, A. C. Marking experiments with Sole (*Solea vulgaris* Quensel) and Turbot (*Rhombus maximus* L.) in the Kattegat and Baltic waters. København Medd. Havunders. Serie Fiskeri **5** Nr. 3 1916 (18 pp.). **77**

Jordan, D. S. On a forgotten genus of Sharks described by Nardo. Philadelphia Proc. Acad. Sci. **1917** (279). **78**

Jordan, D. S. Concerning Rafinesque's Précis des Découvertes Somiologiques. Philadelphia Proc. Acad. Sci. **1917** (276–278). **79**

Jordan, D. S. and **Evermann,** B. W. The Genera of Fishes, from Linnaeus to Cuvier, 1758–1833, with the accepted type of each. Stanford Univ. Publ. **1917** (1–161). **80**

Jordan, D. S. and **Hubbs,** C. L. Notes on a Collection of Fishes from Port Said, Egypt. Pittsburg Ann. Carnegie Mus. **11** 1917 (461–468). **81**

Jordan, D. S. and **Starks,** E. C. Notes on a collection of Fishes from Ceylon, with descriptions of new species. Pittsburg Ann. Carnegie Mus. **11** 1917 (430–460) pls. xliii–xlv. **82**

Jordan, H. Rheotropism of *Epinephelus striatus* Bloch. Washington Proc. Acad. Sci. **3** 1917 (157–159). **83**

Kascharoff, D. N. The alimentary canal of *Cyclothone signata.* Rev. Zool. Russe Moscou **2** 1917 (83–84). **83A**

Kopaczewski, W. Recherches sur le Sérum de la Murène (*Muraena helena* L.). Bull. Inst. Ocean. Monaco **326**-335 1917. **84**

Krivetzki, A. Sur la morphologie des éléments de l'arc hyoide chez les Sélaciens. Rev. Zool. Russe Moscou **2** 1917 (16–19). **85**

Kuntz, A. Notes on the embryology and larval development of five species of Teleostean Fishes. Washington Bull. Bur. Fish. **34** 1914 [1916] (407–429). **86**

Lambe, L. M. Sur la présence de dents d'Hélodonte à Roche Miette et dans les environs, Alberta. Bull. Mus. commem. Victoria Canada **1** 1915 (21–25). **87**

Lamont, A. The Lateral Sense Organs of Elasmobranchs: The Ampullary Canals of the Genus *Raia.* Edinburgh Trans. R. Soc. **51** 1917 (467–493) 8 pls. **88**

Lane, W. H. The Game Fishes of the Persian Gulf. Bombay J. Nat. Hist. Soc. **25** 1917 (121–135). **89**

Lönnberg, E. En laxöring med två munnar. Sv. Fisk. Tidskr. Uppsala **26** 1917 (17–20). **90**

Longley, W. H. The Significance of the Colors of Tropical Reef Fishes. Washington Carnegie Inst. Year Book **15** (209–212) 1917. **91**

Lubosch, W. Kaumuskeln der Knochenfische, Ligamentum maxillomandibulare, Wesen der Streptognathie u. Genese des Squamoso-dentalgelenken. Jenaische Zeitschr. Natw. **1917** (56 pp.). **92**

Mast, S. O. Changes in shade, color and pattern in fishes and their bearing on the problems of adaptation and behavior, with especial reference to the Flounders *Paralichthys* and *Ancylopsetta.* Washington Bull. Bur. Fish. **34** 1914 [1916] (173–238) pls. xix–xxxvii. **93**

Mayes, A. G. On the non-existence of nervous shell-shock in Fishes and marine Invertebrates. Washington Proc. Acad. Sci. **3** 1917 (597–598). **94**

McCulloch, A. R. Studies in Australian Fishes No. 4. Sydney Rec. Austral. Mus. **11** No. 7 1917 (163–188) pls. xxix–xxxi. **95**

McCulloch, A. R. Ichthyological Notes. Australian Zoologist Sydney **1** Pt. 4 1917 (89–93) pl. x. **96**

McCulloch, A. R. and **Waite,** E. R. South Australian Museum Expedition to Strzelecki and Cooper Creeks. Adelaide S. Aust. Trans. R. Soc. **41** 1917 (472–475). **97**

Meek, A. Dove Marine Laboratory. Report for the Year ending June 30th **1917** (54 pp.). **98**

Nichols, J. T. Ichthyological Notes from a cruise off southwest Florida, with description of *Gobiesox yuma* sp. n. New York Bull. Amer. Mus. Nat. Hist. **37** 1917 (873–877) pl. cxi. **99**

Nichols, J. T. and **Griscom,** L. Freshwater fishes of the Congo Basin obtained by the American Museum Congo Expedition, 1909–1915. New York Bull. Amer. Mus. Nat. Hist. **37** 1917 (653–756). **100**

Nordquist, O. Aalstudien. Ark. Zool. Stockholm **11** No. 6 1917 (22 pp.). **101**

Ogilby, J. D. Three undescribed Queensland fishes. Brisbane Proc. R. Soc. Queensland **28** 1916 (112–114). **102**

Otterstrøm, C. V. Fisk III. Fastkaebede, Buskgaellede, Ganoider, Tvaermunde og Rundmunde. (Danmarks Fauna 20). The Danish fishes. III. København (G. E. C. Gad) 1917 (168 pp.). 18½ cm. × 12½ cm. Price 2,75 kr. **103**

Petersen, C. G. J. Om vore almindelige Kutlingers (Gobius) Udvikling fra Ægget til voksen Fisk m.m. The development of the Danish species of *Gobius.* København Ber. Biol. Stat. **24** 1917 (3–16) 1 pl. **104**

Portier, P. *vide* Gueylard, F.

Pratt, J. H. The fisheries of North Carolina. Raleigh J. Mitchell Soc. **32** 1917 (149–175). **105**

Prince, E. P. Notes on the eggs and larval stages of the Halibut. Ottawa Rep. Dep. Fish. **1916** (19–23) 1 pl. **106**

Prince, E. P. On serially striped haddock in New Brunswick. Ottawa Rep. Fish. Dep. **1917** Suppl. (86–90) pl. ix. **107**

Purser, G. L. The early development of the spleen of *Lepidosiren* and *Protopterus.* Q. J. Microsc. Sci. London **62** 1917 (231–241) pls. xv–xvii. **108**

Radcliffe, L. Description of a new Goby, *Garmannia spongicola,* from North Carolina. Washington Proc. U.S. Nation. Mus. **52** 1917 (423–425). **109**

Radcliffe, L. *vide* Evermann, B. W.

Radcliffe, L. and **Welsh,** W. W. Notes on a collection of fishes from the head of Chesapeake Bay. Washington Proc. Biol. Soc. **30** 1917 (35–42). **110**

Regan, C. T. A revision of the clupeoid fishes of the genera *Pomolobus, Brevoortia* and *Dorosoma* and their allies. Ann. Mag. Nat. Hist. London ser. 8 **19** 1917 (297–316). **111**

Regan, C. T. A revision of the clupeoid fishes of the genera *Sardinella, Harengula,* &c. Ann. Mag. Nat. Hist. London ser. 8 **19** 1917 (377–395). **112**

Regan, C. T. A revision of the clupoid fishes of the genus *Pellonula* and of related genera in the rivers of Africa. Ann. Mag. Nat. Hist. London ser. 8 **19** 1917 (198–207). **113**

Regan, C. T. The fishes of the genus *Clupea*. Ann. Mag. Nat. Hist. London ser. **8** 1917 (226–229). **114**

Regan, C. T. Additions to the fish fauna of Natal. Ann. Durban Mus. **1** Pt. 5 1917 (458–459). **115**

Retzius, G. Några bidrag tiu kännedomen om ependym-och nervcellernas struktur i cyclostomernas ryggmärg. [Einige Beiträge zur Kenntnis der Struktur der Ependym- und Nervenzellen im Rückenmark der Cyclostomen.] Stockholm Sv. Läkares. Handl. **42** 1916 (583–593); deutsches Res. 593) 1 pl. **116**

Riddle, M. C. Early development of the Chinook Salmon. Puget Sound Mar. Stat. Publ. **1** 1917 (319–338). **117**

Roule, L. Sur le développement larvaire et post-larvaire des poissons du genre *Mugil*. Paris C. R. Acad. Sci. **164** 1917 (194-196). **118**

Roule, L. Etude sur les aires de ponte et les déplacements périodiques du Thon Commun dans la Méditerranée occidentale. Ann. Inst. Océan. Monaco **7** Fasc. 7 1917 (26 pp.). 119

Roule, L. Sur l'habitat du Thon (*Orcynus thynnus* L.) et ses déplacements littoraux dans la Méditerrannée occidentale française. Paris C. R. Acad. Sci. **165** 1917 (643–646). **120**

Roule, L. Sur les rapports de parenté du Saumon (*Salmo salar* L.) et des Truites d'Europe (*Salmo trutta* L., *Salmo fario* L. et var.). Paris C. R. Acad. Sci. **165** 1917 (721–723). **121**

Rückert, J. Zur Entwicklung der Vena cardinalis posterior von *Torpedo* und deren Beziehungen zur Vorniere. Arch. Mikr. Anat. Bonn **1917** (29 pp.) 2 pls. **122**

Rückert, J. Ueber die Glomeruli der Vorniere von *Torpedo* und deren arterielle Gefässe. Arch. mikr. Anat. Bonn **1917** (79 pp.) 4 pls. **123**

Rynberk, G. A. van. Sur l'innervation segmentale de la peau de la nageoire thoracique chez le requin. (*Scyllium catulus*). Folia neuro-biologica Haarlem **10** 1917 (423–427). **124**

Sanchez y Sanchez, M. Investigaciones sobre la estructura de los tubos nerviosos de los Peces. Trabaj. Mus. Nac. Madrid Ser. Zool. **28** 1917 (96 pp.). **125**

Schiche, O. E. Vorstudien zu biologischen Beobachtungen an *Amiurus nebulosus* Les. Zool. Anz. Leipzig **49** 1917 (336–344). **126**

Schmidt, J. Raceundersøgelser. I. Zoarces viviparus L. og dens lokale Racer. The local races of Zoarces viviparus in the Danish waters. København Medd. Carlsb. **13** 1917 (271–386) 3 maps. **127**

Seale, A. The Mosquito Fish *Gambusia affinis* in the Philippine Islands. Philippine J. Sci. Manila D. **12** 1917 (177—189). **128**

Seale, A. New species of Apodal Fishes. Cambridge Mass. Bull. Mus. Comp. Zool. **61** 1917 (79–94). **129**

Shelford, V. E. An experimental study of the effects of gas waste upon Fishes, with especial reference to stream pollution. Bull. Illinois Lab. Nat. Hist. **11** 1917 (381–412). **130**

Smith, H. M. Report of the U.S. Commissioner of Fisheries for 1915. Washington 1917. **131**

Smith, H. M. New genera of deep-water Gurnards (Peristediidae) from the Philippine Islands. Washington Proc. Biol. Soc. **30** 1917 (145–146). **132**

Snyder, J. O. An account of some Fishes from Owens River, California. Washington Proc. U.S. Nation. Mus. **54** 1917 (201–205). **133**

Snyder, J. O. The fishes of the streams tributary to Tomales Bay, California. Washington Bull. Bur. Fish. **34** 1914 [1916] (377–381). **134**

Starks, E. C. *vide* Jordan, D. S.

Stendell, W. Die Schnauzenorgane der Mormyriden. Zs. Wiss. Zool. Leipzig **1916** (20 pp.) 1 pl. **135**

Takahashi, N. On the homology of the median longitudinal muscles—supracarinalis and infracarinalis—with the fin-muscles of the dorsal and anal fins, and their functions. Tokyo J. Coll. Agric. **6** 1917 (199–213) 2 pls. **136**

Tanaka, S. Figures and descriptions of the fishes of Japan. Tokyo **25, 26** 1917 (441–474) 10 pls. **137**

Taylor, H. F. The structure and growth of the scales of the Squeteague and the Pigfish as indicative of life history. Washington Bull. Bur-Fish. **34** 1914 [1916] (285–330) pls. l.–lix. **138**

Thompson, D'A. W. On some of the scarcer fishes in the Aberdeen Market. Scot. Nat. Edinburgh **1917** (235–249). **139**

Thompson, W. F. A contribution to the life-history of the Pacific Herring; its bearing on the condition and future of the Fishery. British Columbia Rep. Comm. Fish. **1916** (39–87). **140**

Thompson, W. F. Regulation of the Halibut Fishery of the Pacific. British Columbia Rep. Comm. Fish. **1916** (28–34) 1917. **141**

Thompson, W. W. *vide* Gilchrist, J. D. F.

Thulin, T. Den elektriska vävnadens histalogi has *Torpedo.* [Note sur l'histologie de l'organe électrique de la Torpille]. Stockholm Sv. Lakares. Handl. **42** 1916 (607–622 i res. franc. 622) 1 pl. **142**

Vance, L. *vide* **Eigenmann,** C. H.

Vayssière, M. A. Note zoologique et anatomique sur un *Regalecus* (*Gymnetrus*) *gladius* Cuv. et Val. pris dans le golfe de Marseille. Bull. Muséum Paris **1917** (15–25) 2 pls. **143**

Voorhoeve, F. J. Over den bouw van de kleine hersenen der Plagiostomen. [Ueber den Bau des Kleinhirns der Plagiostomen.] Amsterdam (Duwaer & van Ginkel) 1917 (88 pp.) **144**

Waite, E. R. *vide* McCulloch, A. R.

Wells, G. A. The skull of *Acanthias vulgaris.* J. Morph. Boston Mass. **28** 1917 (417–436) 3 pls. **145**

Welsh, W. W. *vide* Radcliffe, L.

Willey, A. Investigation into the Pacific Halibut Fisheries. Ottawa Rep. Dep. Fish. 1916 Suppl. (1–18). **146**

Williamson, H. C. On the Herring in captivity and on an effect of the environment on the structure of this Fish. J. Zool. Res. London **2** 1917 (101–110). **147**

Wintrebert, P. L'automatisme des premiers mouvements du corps chez les Sélaciens (*Scyllium canicula,* Cuv.). Paris C. R. Acad. Sci. **165** 1917 (369–371). **148**

Wintrebert, P. La gastrula des Sélaciens (*Scyllium canicula* Cuv.) Paris C. R. Acad. Sci. **165** 1917 (411–413). **149**

Wodehouse, R. P. Report on the Life History of the Cod as determined from the scales and other data. Ottawa Rep. Dep. Fish. **1916** Suppl. (103–113). **150**

Woodward, A. S. Note on *Plectrodus,* the jaw of an Upper Silurian Fish. Geol. Mag. London (6) **4** 1917 (74–75). **151**

Woodward, A. S. Notes on the Pycnodont Fishes. Geol. Mag. London (6) **4** 1917 (385–389) pl. xxiv. **152**

Woodward, A. S. The so-called coprolites of Ichthyosaurians and Labyrinthodonts. Geol. Mag. London (6) **4** 1917 (540–542) pl. xxxiv. **153**

II.—SUBJECT INDEX.

GENERAL.

Bibliography of Fishes; **Dean & Eastman 36.**

ECONOMICS.

General; **Allen, 1, 2, 3; Bensley, 15; Björck, 17; Blegvad, 18; Gilchrist, 61; Herdman, 69A; Meek, 98; Pratt, 105; Smith, 131.**

Investigations on—Selachii; **Henschen, 69:** *Clupea harengus*; **Andersson, 9:** *Clupea pallasii*; **Thompson, 140:** *Sardina pilchardus*; **Bounhiol, 25, 26:** *Alosa finta*; **Bounhiol, 27:** *Salmo salar*; **Heitz, 68; Hutton, 75:** *Oncorhynchus*; **Fraser, 56, 57; Riddle, 117:** *Anguilla anguilla*; **Nordquist, 101:** *Gadus callarias*; **Wodehouse, 150:** *G. aeglefinus*; **Duff, 38:** *Urophycis chuss*; **Craigie, 32:** *Cynoscion regalis, Orthopristis chrysopterus*; **Taylor, 138:** *Hippoglossus*; **Jespersen, 76; Prince, 106; Thompson, 141; Willey, 146:** *Rhombus maximus* and *Solea vulgaris*; **Johansen, 77.**

STRUCTURE.

General.

Viscera of *Regalecus*; **Vayssièree 143.**

Tegumentary System.

Lips and nostrils; **Allis, 6**: snout organs of Mormyridae; **Stendell, 135**: pigment; **Ballowitz, 11, 12.**

Nervous System.

Dahlgren, 33; Horst, 70; Lamont, 88; Retzius, 116; Sanchez, 125; Rynberg, 124; Voorhoeve, 144.

Alimentary System.

Coprolites; **Woodward, 153**: alimentary canal; **Kascharoff, 83a.**

Myology.

Allis, 5; Lubosch, 92; Takahashi, 136.

Electric organs.

Thulin, 142.

Osteology.

Skeleton; **Daniel, 35; Eastman, 39; Woodward, 152**: skull; **Allis, 4; Wells, 145**: hyoid arch; **Krivetzki, 85.**

Vascular System.

Danforth, 34.

Reproductive System.

Ballowitz, 13; Conel, 31.

Excretory System.

Conel, 31; Rückert, 123.

DEVELOPMENT.

Eggs, Larvae and Post-larval Stages.

Allen, 1; Gilchrist, 60; Kuntz, 86; Petersen, 104; Prince, 106; Riddle, 117; Roule, 118; Wintrebert, 149.

Organogeny.

Skull; **Allis, 4**: vascular system; **Anthony, 10; Ruckert, 122**: suprapericardial body; **Camp, 29**: spleen; **Purser, 108**: intestine; **Hoskins, 71.**

PHYSIOLOGY.

First movements of *Scyllium*; **Wintrebert, 148**: function of muscles; **Takahashi, 136**: of fins; **Boutan, 28**: serum of *Muraena*; **Kopaczewski, 84**: reactions of *Amiurus*; **Schiche, 126**: rheotropism; **Jordan, 83**: effects of gas waste; **Shelford, 130**: of changes of salinity; **Gueyland et Portier, 66, 67**: shell-shock; **Mayer, 94.**

ETHOLOGY.

(See also Economics.)

Habits of — Persian Gulf Fishes; **Lane, 89**: *Gambusia affinis*; **Seale, 128**: *Clupea harengus*; **Williamson, 147.**

Migrations; **Björck, 17; Roule, 119–120.**

Food; **Blegvad, 18.**

Coloration; **Gilchrist, 60; Longley, 91; Mast, 93.**

VARIATION AND EVOLUTION.

Evolution; **Boulenger, 20, 21; Eigenmann, 41; Roule, 121; Schmidt, 127**: Variation; **Prince, 107; Schmidt, 127; Williamson, 147**: Teratology; **Amemiya, 7; Bamber, 14; Drooglever, 37; Festa, 53; Lönnberg, 90.**

DISTRIBUTION.

(a) Marine.

Sub-arctic and North Temperate zones.

Britain; **Allen, 1; Thompson, 139**: Denmark; **Otterstrom, 103**: Mediterranean; **Jordan & Hubbs, 81**: Chesapeake Bay; **Radcliffe & Welsh, 110**: British Columbia; **Gilbert, 58**: Japan; **Tanaka, 137.**

Tropical Zone.

W. Atlantic; **Fowler, 55; Nichols, 99; Pratt, 105; Radcliffe, 109**: Natal; **Gilchrist & Thompson, 63; Regan, 115**: Persian Gulf; **Lane, 89**: Ceylon; **Jordan & Starks, 82**: India; **Chaudhuri, 30**: Queensland; **McCulloch, 95, 96; Ogilby, 102**: Philippines; **Smith, 132**: Hawaii; **Gilbert & Hubbs, 59.**

South Temperate Zone.

S. Africa; **Gilchrist, 61**; **Gilchrist & Thompson, 62**: Australia; **McCulloch, 95, 96**: Chile and Peru; **Evermann & Radcliffe, 52**; **Hubbs, 72.**

(b) FRESHWATER.

Palaearctic.

Europe; **Ekman, 49, 50**; **Otterstrom, 103**: Yalu R.; **Ginsburg, 65.**

Nearctic.

Bensley, 15; **Evermann & Hildebrand, 51**; **Huntsman, 73**; **Snyder, 133, 134.**

Indian.

Ceylon; **Jordan & Starks, 82.**

Ethiopian.

Africa; **Boulenger, 22, 23, 24**; **Gilchrist & Thompson, 64**; **Nichols & Griscom, 100**; **Regan, 113.**

Neotropical.

S. America; **Eigenmann, 42–46**; **Eigenmann & Fisher, 47**; **Eigenmann & Vance, 48**; **Evermann & Radcliffe, 52**; **Fisher, 54.**

Australian.

McCulloch & Waite, 97.

(c) FOSSIL.

Eastman, 39: Silurian; **Woodward, 151**: Devonian; **Lambe, 87**: Permo-carboniferous; **Andersson, 8**: Triassic and Eocene; **Hussakof, 74**: Miocene; **Berry, 16.**

III.—SYSTEMATIC.

GENERAL WORKS.

ALLEN **1**; ANDERSSON **8**; BENSLEY **15**; CHAUDHURI **30**; EASTMAN **39**; EIGENMANN **42, 44**; EVERMANN & RADCLIFFE **52**; FISHER **54**; FOWLER **55**; GILCHRIST **61**; GILCHRIST & THOMPSON **62–64**; HUSSAKOFF **74**; JORDAN **79**; JORDAN & EVERMANN **80**; JORDAN & HUBBS **81**; JORDAN & STARKS **82**; LANE **89**; MCCULLOCH **95, 96**; MCCULLOCH & WAITE, **97**; NICHOLS **99**; NICHOLS & GRISCOM **100**; OTTERSTROM **103**; PRATT **105**; RADCLIFFE & WELSH **110**; SNYDER **134**; TANAKA **137.**

MARSIPOBRANCHII.

Spinal cord, RETZIUS **116.**

PETROMYZONIDAE.

Of E. Canada, HUNTSMAN **73.**

MYXINIDAE.

Urinogenital system, CONEL **31.**

SELACHII.

†*Plectrodus*, WOODWARD **151.**

Hyoid arch, KRIVETZKI **85**; Kleinhirn, VOORHOEVE **144**; Coprolites, WOODWARD **153.**

ICHTHYODORULITES.

†*Harpacanthus procumbens* **sp. n.** Carboniferous Missouri, EASTMAN Proc. U.S. Nat. Mus. **52** p. 266 pl. vii f. 1.

†*Oracanthus triangularis* **sp. n.** Carboniferous Missouri, EASTMAN t. c. p. 268 pl. v figs 5, 6.

PLEUROPTERYGII.

†*Cladodus aculeatus* **sp. n.** Carboniferous of Oklahoma, EASTMAN Proc. U.S. Nat. Mus. **52** p. 255 pls. x f. 4 xviii f. 1.

EUSELACHII.

PLEUROTREMATA.

Caninoa, JORDAN **78.**

HEXANCHIDAE.

Heptanchus maculatus skeleton, DANIEL **35.**

CARCHARIIDAE.

Mustelus abbotti p. 6 pl. i f. 2, *nigromaculatus* p. 9 pl. ii f. 2, **spp. n.**, Peru, EVERMANN & RADCLIFFE Bull. U.S. Nat. Mus. **95.**

Carcharinus **spp.** Florida, NICHOLS **99.**

Scyliorhinidae.

Scyliorhinus canicula hermaphrodite, Bamber **14**; embryology, Wintrebert **148, 149**; *S. punctatus* **sp. n.** S. Africa, Gilchrist Mar. Biol. Rep. **2** p. 129 fig.

Petalodontidae.

†*Polyrhizodus grandis* **sp. n.** Carboniferous of Illinois, Eastman Proc. U.S. Nat. Mus. **52** p. 257 pl. viii figs. 1, 2.

Hybodontidae.

†*Helodus subtuberatus* **sp. n.** Devonian, Alberta, Lambe Bull. Mus. Victoria Canada **1** p. 24.

Heterodontidae.

Gyropleurodus peruanus **sp. n.** Peru, Evermann & Radcliffe Bull. U.S. Nat. Mus. **95** p. 2 pl. I f. 1.

Squalidae.

Squalus brevirostris **sp. n.** Japan, Tanaka Fishes of Japan **26** p. 464 f. 364; *S. acanthias* skull, Wells **145**; development of suprapericardial body, Camp **29**; of intestine, Hoskins **71.**

HYPOTREMATA.

Torpedinidae.

Electric motor nerve cell, Dahlgren **33**; electric organs, Thulin **142.**

Raiidae.

Raia ampullary canals, Lamont **88.**

Trygonidae.

Pteroplatea australis, McCulloch **95.**

HOLOCEPHALI.

Chimaera monstrosa, distribution, Thompson **139**; *C. colliei* chondrocranium, Allis **4.**

PISCES.

PALAEOPTERYGII.

Platysomidae.

†*Ecrinesomus*, Andersson **8.**

†Catopteridae.

†*Catopterus gracilis*, Eastman **39.**

NEOPTERYGII.

PROTOSPONDYLI.

†Semionotidae.

†*Lepidotus congolensis* **sp. n.** Trias Congo, Hussakof Bull. Amer. Mus. **37** p. 761 figs.; *L. walcotti* **sp. n.** Trias of Wyoming, Eastman Proc. U.S. Nat. Mus. **52** p. 283 pls. xii f. 4 xiii f. 3.

†Macrosemiidae.

†*Notagogus minutus* **sp. n.** Jurassic Bavaria Eastman Proc. U.S. Nat. Mus. **52** p. 287 pl. xiv f. 4.

†Aspidorhynchidae.

†*Belonostomus tenuirostris*, Eastman **39.**

†Pycnodontidae.

Structure, evolution, Woodward **152.**

ISOSPONDYLI.

Clupeidae.

Clupea synopsis of spp., Regan Ann. Mag. N.H. (8) **19** p. 227; *C harengus* in captivity, Williamson **147**; growth, Andersson **9**; *C. pallassii* variation, life history, Thompson **140.**

Sardina sardina, Bounhiol **25, 26.**

Sardinella cameronensis p. 380 Camaroon *duyi* p. 381 India **spp. n.**, Regan Ann. Mag. N.H. (8) **19.**

Harengula revision, Regan t.c. p. 386.

Lile platana **sp. n.** La Plata, Regan t.c. p. 394.

Heringia revision, Regan t.c. p. 394.

Hyperlophus translucilus **sp. n.**, McCulloch Rec. Austral. Mus. **11** p. 165 pl. xxix f. 3.

Alosa finta habits, Bounhiol **27.**

Pomolobus revision, Regan Ann. Mag. N.H. (8) **19** p. 299.

Brevoortia pectinata, Regan t.c. p. 301.

Ethmalosa **gen. n.** type *Clupea dorsalis*, Regan t.c. p. 302.

Hilsa **gen. n.** = *Paralosa* Regan *nec* Bleek. revision of spp., Regan t.c. p. 303.

Nematalosa **gen. n.** p. 312 *japonica* Japan *arabica* Muscat, **spp. n.** p. 313, REGAN t.c.

Gonialosa **gen. n.** type *Chatoessus modestus*, REGAN t.c. p. 315.

Pellonula tenuis **sp. n.** Congo, NICHOLS & GRISCOM Bull. Amer. Mus. **37** p. 675 f. 3, *P. stanleyana* **sp. n.** Stanley Falls, REGAN Ann. Mag. Nat. Hist. (8) **19** p. 201.

Poecilothrissa **gen. n.** p. 201 *congica* **sp. n.** p. 202 Congo, REGAN t.c.

Microthrissa parva **sp. n.** Upper Congo, REGAN t.c. p. 202.

Potamothrissa **gen. n.** type *Pellonula oblusirstris*, REGAN t.c. p. 203.

Cynothrissa **gen. n.** p. 203 *mento* **sp. n.** p. 204 fig. Nigeria, REGAN t.c.

Odaxothrissa vittata **sp. n.** Ubanghi, REGAN t.c. p. 205.

Stolothrissa **gen. n.** *tanganicae* **sp. n.** Tanganyika, REGAN t.c. p. 206 fig.

Limnothrissa **gen. n.** type *Pellonula miodon*, REGAN t.c. p. 207.

Ilisha harroweri **sp. n.** Colon, FOWLER Proc. Acad. Philadelphia **69** p. 128 fig.

Stolephorus branchiomelas **sp. n.** Colombia EIGENMANN Proc. Amer. Phil. Soc. **56** p. 682.

KNERIIDAE.

Kneria stappersii **sp. n.** Lumbumbashi, BOULENGER Rev. Zool. Afr. **4** p. 162.

SALMONIDAE.

Oncorhynchus life history, FRASER **56**, **57**; early development, RIDDLE **117**.

Salmo marine origin, BOULENGER **21**; ROULE **121**; *S. salar*, HEITZ **68**; HUTTON **75**.

GALAXIIDAE.

Galaxias dubius **sp. n.** S. Africa, GILCHRIST & THOMPSON Ann. S. Afric. Mus. **11** p. 472.

GONOSTOMATIDAE.

Cyclothone signata alimentary canal, KASCHAROFF **83a**.

MORMYRIDAE.

Schnauzenorgane, STENDELL **135**.

Marcusenius osborni p. 667 f. 1, *retrodorsalis* p. 668 f. 2 **spp. n.** Congo, NICHOLS & GRISCOM Bull. Amer Mus. **37**; *M. stappersii*, *squalostoma* **spp. n.** Lukinda, BOULENGER Rev. Zool. Afr. **4** p. 162.

Gnathonemus moeruensis **sp. n.** Moero, BOULENGER t.c. p. 163.

Mormyrus asinus **sp. n.** Moero, BOULENGER t.c. p. 163.

OSTARIOPHYSI.

CYPRINOIDEA.

CHARACIDAE.

Alestes carmesinus **sp. n.** Congo, NICHOLS & GRISCOM Bull. Amer. Mus. **37** p. 681 f. 5.

Alestes vittatus **sp. n.** Tanganyika, BOULENGER Ann. Mag. N.H. (8) **20** p. 363.

Brycon ecuadorensis p. 687, *meeki* p. 688 **spp. n.** Ecuador, EIGENMANN Proc. Amer. Phil. Soc. **56**.

Entomolepis **gen. n.** type *Tetragonopterus steindachneri*, EIGENMANN Mem. Mus. Comp. Zool. **43** p. 63.

Moenkhausia lepidura hasemani **subsp. n.** Santarem, EIGENMANN t.c. p. 102 pl. xv f. 3.

CITHARINIDAE.

Nannocharax luapulae **sp. n.** Luapula, BOULENGER Rev. Zool. Afr. **4** p. 163.

Distichodus largi **sp. n.** Congo NICHOLS & GRISCOM Bull. Amer. Mus. **37** p. 687 pl. lxix.

Microstomatichthyoborus **gen. n.** *bashforddeani* **sp. n.** Congo, NICHOLS & GRISCOM t.c. p. 685 f. 6.

CYPRINIDAE.

Barilius salmolucius **sp. n.** Congo, NICHOLS & GRISCOM Bull. Amer. Mus. **37** p. 702 f. 16.

Engraulicypris congicus **sp. n.** Congo, NICHOLS & GRISCOM t.c. p. 703 f. 17; *E. moeruensis* **sp. n.** Moero, BOULENGER Rev. Zool. Afr. **4** p. 168.

Amblypharyngodon grandisquamis sp. n. Ceylon, Jordan & Starks Ann. Carnegie Mus. **11** p. 438 pl. xliv.

Barbus trachypterus p. 164, *stappersii, curtus, oxycephalus* p. 165, *pseudognathodon* p. 166 Moero, *lukindae, brachygramma* p. 166, *brevidorsalis* p. 167, Lukinda, *intermedius* p. 167 Luapula spp. n., Boulenger Rev. Zool. Afr. **4**; *B. taeniopleura* p. 364 *urostigma, lufukiensis* p. 365 spp. n. Tanganyika, Boulenger Ann. Mag. N.H. (8) **20**; *B. atromaculatus* p. 697 f. 12, *rubripinnis* p. 699 f. 13, *dolichosoma* p. 700 f. 14, *candens* p. 701 f. 15 spp. n. Congo, Nichols & Griscom Bull. Amer. Mus. **37**; *B. annectens* sp. n. S. Africa, Gilchrist & Thompson Ann. S. Afric. Mus. **11** p. 554; *Barbus* sexual characters, Boulenger **19**; icterism, Festa **53**.

Varicorhinus stappersii sp. n. Tanganyika, Boulenger Ann. Mag. N.H. (8) **20** p. 364.

Labeo fisheri sp. n. Ceylon, Jordan & Starks Ann. Carnegie Mus. **11** p. 436 pl. xliii; *L. hamiltoni* sp. n. S. Africa, Gilchrist & Thompson Ann. S. Afric. Mus. **11** p. 553; *L. cyclopinnis* p. 690 f. 8 *sorex* p. 691 f. 9 *intermedius* p. 694 f. 10 spp. n. Congo, Nichols & Griscom Bull. Amer. Mus. **37**.

Discognathus ornatus sp. n. Congo, Nichols & Griscom t.c. p. 696 f. 11.

Hemibarbus longirostris, Ginsburg **65**.

SILUROIDEA.

Of Carnegie Museum, Fisher **54**.

Ariidae.

Galeichthys ocellatus sp. n. S. Africa, Gilchrist & Thompson Mar. Biol. Rep. **3** p. 61 fig.

Bagridae.

Gnathobagrus gen. n. p. 711 *depressus* sp. n. p. 712 fig. 21 Congo, Nichols & Griscom Bull. Amer. Mus. **37**.

Amarginops gen. n. *platus* sp. n. Congo, Nichols & Griscom t.c. p. 713 f. 22.

Chrysichthys stappersii p. 366, *grandis* p. 367, spp. n., Tanganyika, Boulenger Ann. Mag. N.H. (8) **20**.

Leptoglanis brevis sp. n. Lubumbashi, Boulenger Rev. Zool. Afr. **4** p. 169.

Amphiliidae.

Amphilius notatus sp. n. Congo, Nichols & Griscom Bull. Amer. Mus. **37** p. 715 f. 24; *A. natalensis* sp. n. Natal, Boulenger Ann. Durban Mus. **1** p. 432.

Doumea alula sp. n. Congo, Nichols & Griscom Bull. Amer. Mus. **37** p. 722 f. 27.

Schilbeidae.

Eutropius gastratus sp. n. Congo, Nichols & Griscom Bull. Amer. Mus. **37** p. 708 f 20; *E. nasalis* sp. n. Moero, Boulenger Rev. Zool. Afr. **4** p. 169.

Clariidae.

Clarias zygouron p. 704 f. 18, *malaris* p. 705 f. 19, spp. n., Congo Nichols & Griscom Bull. Amer. Mus. **37**; *C. stappersii, macrurus*, spp. n., Lukinda, Boulenger Rev. Zool. Afr. **4** p. 168.

Dinotopterus jallae sp. n. S. Africa. Gilchrist & Thompson Ann. S. Afric, Mus. **11** p. 557 fig. 165.

Mochocidae.

Synodontis unicolor, polystigma spp. n. Moero and Luapula, Boulenger Rev. Zool. Afr. **4** p. 170; *S. dhonti* sp. n. Tanganyika, Boulenger Ann. Mag. N.H. (8) **20** p. 367; *S. tenuis* sp. n. Congo, Nichols & Griscom Bull. Amer. Mus. **37** p. 717 f. 25; *S. jallae* sp. n. S. Africa, Gilchrist & Thompson Ann. S. Afric. Mus. **11** p. 561.

Acanthocleithron gen. n. p. 720, *chapini* sp. n. p. 721 f. 26 Congo, Nichols & Griscom Bull. Amer. Mus. **37**.

Chiloglanis elisabethianus sp. n. Lubumbashi, Boulenger Rev. Zool. Afr. **4** p. 171.

Amiuridae.

Amiurus primaevus sp. n. Eocene (?) of Wyoming Eastman Proc. U.S. Nat. Mus. **52** p. 293 pl. xx; *A. nebulosus* habits, reactions, Schiche **126**.

Pimelodidae.

Cheriocercus gen. n. *eques* sp. n. Brazil Eigemann Ann. Carnegie Mus. **11** p. 398 pl. xxxix.

Rhamdia microps **sp. n.** Uruguay, EIGENMANN & FISHER Ann. Carnegie Mus. **11** p. 394 pl. xxxviii.

Pimeilodella serrata p. 235 pl. xxix f. 1 Bolivia, *steindachneri* p. 237, Amazon, *avahandavae* p. 240 pl. xxix f. 3, Tieté, *hasemani* p. 241 pl. xxx f. 7 Amazon, *laticeps* p. 243 pl. xxx f. 2, *notomelas* p. 244 pl. xxx f. 3. Paraguay, *metae* p. 244 pl. xxxi f. 2 Orinoco, *boliviana* p. 245 pl. xxxi f. 2 Bolivia, *itapicuruensis* p. 247 pl. xxxi f. 3 E. Brazil, *griffini* p. 250 pl. xxxii f. 3 Paraguay, **spp. n.**, EIGENMANN Mem. Carnegie Mus. **7**.

DORADIDAE.

Doras lentiginosus **sp. n.** Amazon, EIGENMANN Ann. Carnegie Mus. **11** p. 401 pl. xl.

Entomocorus **gen. n.** *benjamini* **sp. n.** San Joaquin, EIGENMANN t.c. p. 403 pl. xli.

Ageneiosus madeirensis **sp. n.** Bolivia, FISHER Ann. Carnegie Mus. **11** p. 426 pl. xlii.

TRICHOMYCTERIDAE.

Scleronema **gen. n.** *operculatum* **sp. n.** Uruguay, EIGENMANN Proc. Amer. Phil. Soc. **56** p. 691.

Hatcheria titcombi **sp. n.** R. Comajo EIGENMANN t.c. p. 692.

Pygidium heterodontum p. 692 Argentine, *latidens* p. 693, *metae*, *straminium* p. 694, *dorsoseriatum* p. 695, *latistriatum*, *regani* p. 696 Colombia, *iheringi* p. 697, *paolence* p. 698, *reinhardti*, *vermiculatum* p. 699, *alternatum* p. 700, Brazil, **spp. n.**, EIGENMANN t.c.

Vandellia sanguinea **sp. n.** R. Madeira, EIGENMANN t.c. p. 701.

Branchioica **gen. n.** p. 702, *bertoni* **sp. n.** p. 703, Paraguay, EIGENMANN t.c.

LORICARIIDAE.

Hemiancistrus wilsoni **sp. n.** Colombia, EIGENMANN Proc. Amer. Phil. Soc. **56** p. 678.

Pseudancistrus pediculatus **sp. n.** Colombia, EIGENMANN t.c. p. 679

Ancistrus triradiatus **sp. n.** Colombia, EIGENMANN t.c. p. 680.

Chaetostomus leucomelas **sp. n.** Colombia, EIGENMANN t.c. p. 681.

Farlowella azygia p. 299 pl. xxix figs. 1, 2, Santarem, *jauruensis* p. 300 pl. xxx f. 3 Jaura, *hasemani* p. 301 pl. xxx figs. 1, 2, Para **spp. n.**, EIGENMANN & VANCE Ann. Carnegie Mus. **11**.

Astroblepus latidens p. 674, *frenatus* p. 676, **spp. n.**, *cyclopum santanderensis* p. 675, *grixalvii mierescens* p 677, **varr. n.**, Colombia, EIGENMANN Proc. Amer. Phil. Soc. **56**.

APODES.

ANGUILLIDAE.

Anguilla anguilla, NORDQUIST **101**.

MURAENIDAE.

Muraena helena serum, KOPACZEWSKI **84**; *M. vagrans* S. America, *viridipinna* Mauritius p. 88, *acutis* Gulf of Panama p. 89 **spp. n.**, SEALE Bull. Mus. Comp. Zool. **61**.

Gymnothorax pikei p. 90, *elegans* p. 91, *insignis* p. 93 Mauritius, *dorsalis* p. 92 Hong Kong **spp. n.**, SEALE t.c.

Scuticaria unicolor **sp. n.** Society Is., SEALE t.c. p. 94.

ECHELIDAE.

Muraenichthys labialis **sp. n.** Marshall Is., SEALE Bull. Mus. Comp. Zool. **61** p. 79.

Garmanichthys **gen. n.** *dentatus* **sp. n.** Barbados, SEALE t.c. p. 80.

OPHICHTHYIDAE.

Bascanichthys pusillus **sp. n.** Fiji, SEALE Bull. Mus. Comp. Zool. **61** p. 81.

Quasiremus productus p. 82 Bahamas, *parvipinna* p. 83 Acapulco **spp. n.** SEALE t.c.

Ophichthys serpentinus p. 84 S. Africa, *uniserialis* p. 85 China, *exilis* p. 86 Chile **spp. n.**, SEALE t.c.

Myrichthys aki **sp. n.** Japan, TANAKA Fishes of Japan **26** p. 458 figs. 358–360.

MICROCYPRINI.

Cyprinodontidae.

†*Parafundulus* **gen. n.** *nevadensis* **sp. n.** Tertiary Nevada, Eastman Proc. U. S. Nat. Mus. **52** p. 291 pls. xvi f. 1 xvii, xviii f. 3.

Haplochilus platysternus **sp. n.** Congo, Nichols & Griscom Bull. Amer. Mus. **37** p. 724 f. 28.

Cyprinodon variegatus, *Lucania parva* eggs and larvae, Kuntz **86**.

Gambusia affinis habits, Seale **128**.

SYNENTOGNATHI.

Hemirhamphidae.

Hemirhamphus picarti, Jordan & Hubbs **81**.

ANACANTHINI.

Gadidae.

Gadus callarias life history, Wodehouse **150**; *G. aeglefinus* growth, Duff **38**; variation, Prince **107**.

Urophycis chuss life history, Craigie **32**.

Macruridae.

Hymenocephalus tenuis **sp. n.** Hawaii, Gilbert & Hubbs Proc. U.S. Nat. Mus. **54** p. 173.

ALLOTRIOGNATHI.

Trachypteridae.

Regalecus gladius visceral anatomy, Vayssière **143**.

SOLENICHTHYES.

Syngnathidae.

Hippocampus olden time knowledge, Eastman **40**; *H. arnei* **nom. n.** = *H. aimei*, Roule Bull. Mus. Paris **1916** p. 383.

PERCOMORPHI.

PERCOIDEA.

Serranidae.

Epelytes **gen. n.** *punctatus* **sp. n.** Peru, Evermann & Radcliffe Bull. U. S. Nat. Mus. **95** p. 71 pl. vi f. 3.

Therapon welchi, *barcoo* **spp. n.** Central Australia, McCulloch & Waite Trans. R. Soc. S Australia **41** pp. 472–475.

Plesiopidae.

Paraplesiops jollifei **sp. n.** Queensland, Ogilby Proc. R. Soc. Queensland **28** p. 112.

Chilodipteridae.

Glossamia aprion, *gillii*, McCulloch **95**.

Centrarchidae.

†*Priscacara dartonae* **sp. n.** Eocene of Wyoming, Eastmann Proc. U.S. Nat. Mus. **52** p. 296 pl. xxiii.

Scorpididae.

Scorpis Australian spp., McCulloch **95**.

Latilidae.

Caulolatilus cabezon **sp. n.** Peru, Evermann & Radcliffe Bull. U S. Nat. Mus. **95** p. 111 pl. x f. 3.

Pomatomidae.

Pomatomus lophar, Jordan & Hubbs **81**.

Carangidae.

Selene gibbiceps **sp. n.** S. Africa, Gilchrist Mar. Biol. Rep. **2** p. 130 fig.

Lutianidae.

Aprion roseus, McCulloch **95**.

Nemipteridae.

Nemipterus theodorei **sp. n.** Queensland, Ogilby Proc. R. Soc. Queensland **28** p. 113.

Liognathidae.

Gerres periche **sp. n.** Peru, Evermann & Radcliffe Bull. U.S. Nat. Mus. **95** p. 93 pl. viii f. 3.

Gazza achlammys **sp. n.** Ceylon, Jordan & Starks Ann. Carnegie Mus. **11** p. 446 pl. xlv.

POMADASIDAE.

Pomadasys sinuosus **sp. n.** Colombia, EIGENMANN Proc. Amer. Phil. Soc. **56** p. 683.

Dacymba **gen. n.** type *Pristipoma bennettii* Lowe, JORDAN & HUBBS Ann. Carnegie Mus. **11** p. 464.

Orthopristis chrysopterus life history, TAYLOR **138.**

SCIAENIDAE.

Sciaena starksi **sp. n.** Peru, EVERMANN & RADCLIFFE Bull. U.S. Nat. Mus. **95** p. 104.

Menticirrhus cokeri **sp. n.** Peru, EVERMANN & RADCLIFFE t.c. p. 107 pl. x f. 2.

Stellifer melanochir **sp. n.** Colombia, EIGENMANN Proc. Amer. Phil. Soc. **56** p. 682.

Cynoscion regalis life history, TAYLOR **138.**

SPARIDAE.

Dentex albus **sp. n.** S. Africa, GILCHRIST Mar. Biol. Rep. **2** p. 128 fig.

HOPLEGNATHIDAE.

Hoplegnathus algoensis **sp. n.** S. Africa, GILCHRIST & THOMPSON Mar. Biol. Rep. **3** p. 56 fig.

CICHLIDAE.

Pelmatochromis robustus p. 538 fig., *ngamensis* p. 539 fig., **spp. n.**, S. Africa, GILCHRIST & THOMPSON Ann. S. Afric. Mus. **11.**

Tilapia Arnoldi p. 497, *druryi* p. 500, *ellenbergeri* p. 504, *intermedia* p. 482, *kirkhami* p. 510 fig. 36, *mackeani* p. 499, *rumsayi* p. 501 fig. 129, *sheshekensis* p. 489, *swierstrae* p. 498 fig. 128, *sykesii* p. 500, **spp. n.**, S. Africa, GILCHRIST & THOMPSON t.c.

Paratilapia arnoldi p. 521, *ellenbergeri* p. 521 fig., *marginata* p. 581, *zambesensis* p. 523 fig., **spp. n.**, S. Africa, GILCHRIST & THOMPSON t.c.; *P. longipinnis* p. 728 f. 29, *xenodon* p. 729 f. 30, **spp. n.**, Congo, NICHOLS & GRISCOM Bull. Amer. Mus. **37.**

Lamprologus obliquus **sp. n.** Congo, NICHOLS & GRISCOM t.c. p. 731 f. 31.

POMACENTRIDAE.

Chromis intercrusma **sp. n.** Peru, EVERMANN & RADCLIFFE Bull. U.S. Nat. Mus **95** p. 119 pl. xi f 3.

LABRIDAE.

Labrus mixtus larva, ALLEN **1.**

SCARIDAE.

Xenoscarus **gen. n.** *denticulatus* **sp. n.** Peru, EVERMANN & RADCLIFFE Bull. U.S. Nat. Mus. **95** p. 129 pl. xii f. 1.

Callyodon margarita **sp. n.** Colon, FOWLER Proc. Acad. Philadelphia **69** p 133 fig.

MUGILOIDEA.

SPHYRAENIDAE.

Sphyraena raghava **sp. n.** Chilka Lake, CHAUDHURI Mem. Ind. Mus. **5** p. 500 fig.

ATHERINIDAE.

Kirtlandia vagrans eggs and larvae, KUNTZ **86.**

Colpichthys **gen. n.** type *Atherinops regis* HUBBS Proc. Ac. Philad. **1917** p. 305.

Thyrinops **gen. n.** type *Atherinichthys pachylepis*, HUBBS t.c. p. 306.

Austromenidia **gen. n.** type *Basilichthys regillus*, HUBBS t.c. p. 307.

MUGILIDAE.

Joturus daguae **sp. n.** Colombia, EIGENMANN Proc. Amer. Phil. Soc. **56** p. 681.

Mugil larvae, ROULE **118.**

ANABANTOIDEA.

ANABANTIDAE.

Anabas rhodesianus **sp. n.** S. Africa GILCHRIST & THOMPSON Ann. S. Afric. Mus. **11** p. 548.

TRICHIUROIDEA.

TRICHIURIDAE.

Benthodesmus atlanticus, GILBERT **58.**

SCOMBROIDEA.

SCOMBRIDAE.

Scomber scomber larvae, ALLEN **1**.
Orcynus thynnus habits, ROULE **119**, **120**.

HISTIOPHORIDAE.

Istiophorus calvertensis sp. n. Miocene of Virginia, BERRY Amer. J. Sci. **43** p. 461 figs.

GOBIOIDEA.

ELEOTRIDAE.

Hemieleotris levis sp. n. Colombia, EIGENMANN Proc. Amer. Phil. Soc. **56** p. 684.

GOBIIDAE.

Gobius development, PETERSEN **104**. —*G. lidwilli* sp. n. Sydney, MCCULLOCH Rec. Austral, Mus. **11** p. 187 pl. xxi. f. 3.—*G.* (*Ctenogobius*) *daguae* sp. n. Colombia, EIGENMANN Proc. Amer. Phil. Soc. **56** p. 685.

Ctenogobius stigmaticus eggs and larvae, KUNTZ **86**.

Rhinogobius sowerbyi sp. n. Yalu R., GINSBURG Proc. U.S. Nat. Mus. **54** p. 100.

Awaous decemlineatus sp. n. Colombia. EIGENMANN Proc. Amer. Phil. Soc, **56** p. 686.

Garmannia spongicola sp. n. N. Carolina, RADCLIFFE Proc. U.S. Nat. Mus. **52** p. 423 fig.

Gobiosoma bosci eggs and larvae, KUNTZ **86**.

Sicydium hildebrandi sp. n. Colombia, EIGENMANN Proc. Amer. Phil. Soc. **56** p. 685.

BLENNIOIDEA.

BLENNIIDAE.

Petroscirtes anotius, rotundiceps, MCCULLOCH **96**.

Aspidontus maroubrae, MCCULLOCH **96**.

CLINIDAE.

Porogrammus capensis sp. n. S. Africa, GILCHRIST & THOMPSON Mar. Biol. Rep. **3** p. 57 fig.

ZOARCIDAE.

Zoarces viviparus variation, evolution, races, SCHMIDT **127**.

BROTULIDAE.

Brotula maculata sp. n. Peru, EVERMANN & RADCLIFFE Bull. U.S. Nat. Mus. **95** p. 151 pl. xiii. f. 3.

SCLEROPAREI.

SCORPAENIDAE.

Sebastichthys chamaco sp. n. Peru EVERMANN & RADCLIFFE Bull. U.S. Nat. Mus. **95** p. 136 pl. xii f. 3.

TRIGLIDAE.

Gargariscus gen. n. *semidentatus* sp. n. Philippines, SMITH Proc. Biol. Soc. Washington **30** p. 145.

Heminodus gen. n. *philippinus* sp. n. Philippines, SMITH t.c. p. 146.

HETEROSOMATA.

Color changes, MAST **93**.

BOTHIDAE.

Rhombus maximus migration, JOHANSEN **77**.

PLEURONECTIDAE.

Hippoglossus vulgaris life history JESPERSEN **76** PRINCE **106**; THOMPSON **141**; WILLEY **146**.

SOLEIDAE.

Solea vulgaris migration, JOHANSEN **77**.

Soleichthys, MCCULLOCH **96**.

PLECTOGNATHI.

BALISTIDAE.

Cantherines maynardi sp. n. Queensland, OGILBY Proc. R. Soc. Queensland **28** p. 114.

SYMBRANCHII.

Symbranchidae.

Fore-brain, Horst 70.

XENOPTERYGII.

Gobiesocidae.

Gobiesox yuma sp. n. Florida, Nichols Bull. Amer. Mus. 37 p. 876 fig.

Arbaciosa hieroglyphica sp. n. Peru, Evermann & Radcliffe Bull. U. S. Nat. Mus. 95 p. 155 pl. xiv f. 2.

PEDICULATI.

Batrachoididae.

Porichthys afuerae sp. n. Peru, Evermann & Radcliffe Bull. U.S. Nat. Mus. 95 p. 152 pl. xiv f. 1.

Lophiidae.

Lophuis piscatorius larva, Allen 1.

Oncocephalidae.

Halieutichthys fitzsimonsi sp. n. S. Africa, Gilchrist & Thompson Mar. Biol. Rep. 3 p. 58 fig.

HETEROSTRACI.

†*Atraspis desiderata* fig., Eastman 39.

XVI. REPTILIA AND BATRACHIA

ARRANGED BY

C. TATE REGAN, F.R.S.

CONTENTS

	PAGE
I. Titles	2
II. Subject Index:—	
Structure	8
Physiology	8
Development...	8
Ethology	8
Aetiology, Teratology	8
Faunae	8
Actual	8
Fossil	9
III. Systematic:—	
Reptilia	9
Lacertilia	9
Ophidia	10
Plesiosauria	11
Crocodilia	11
Dinosauria...	11
Chelonia	11
Cotylosauria	11
Anomodontia	11
Batrachia	12
Ecaudata	12
Caudata	13
Apoda	13
Stegocephalia	13

I.—TITLES.

Adler, L. Untersuchungen über die Entstehung der Amphibienneotenia. Zugleich ein Beitrag zur Physiologie des Amphibienschilddrüse. Arch. ges. Physiol. Bonn **1916** (101 pp.) 7 pls. **1**

Allen, B. M. Effects of the extirpation of the anterior lobe of the hypophysis of *Rana pipiens*. Biol. Bull. Woods Hole **32** 1917 (117–130). **2**

Andersson, L. G. Results of Dr. E. Mjöberg's Swedish scientific expeditions to Australia 1910–1913. 9. Batrachians from Queensland. Stockholm Vet.-Ak. Handl. **52** No. 9 1916 (20 pp.) 1 pl. **3**

Annandale, N. Report on a collection of Reptiles and Batrachians from Java. J. Fed. Malay Mus. Kuala Lumpur **7** 1917 (107–111). **4**

Annandale, N. The occurrence of *Rana pleskii* Günther in Kashmir. Rec. Ind. Mus. Calcutta **13** 1917 (417–418). **5**

Archer, E. Abnormal circulation of a Frog. Melbourne Proc. R. Soc. Victoria **30** 1917 (96–97) pl. xviiii. **6**

Axt, M. C. Die Beugemuskeln der Hinterextremität von *Emys blandingi*. Morph. Jahrb. Leipzig **1917** (22 pp.). 8 pls. **7**

Barbour, T. Notes on the Herpetology of the Virgin Islands. Washington Proc. Biol. Soc. **30** 1917 (97–104). **8**

Barbour, T. A new Antillean *Sphaerodactylus*. Washington Proc. Biol. Soc. **30** (163–164). **9**

Barbour, T. and **Noble,** G. K. A revision of the Lizards of the genus *Cyclura*. Cambridge Mass. Bull. Mus. Comp. Zool. **60** 1916 (140–164) 15 pls. **10**

Barbour, T. and **Ramsden,** C. T. A new *Anolis* from Cuba. Washington Proc. Biol. Soc. **29** 1916 (19–20). **11**

Baumann, F. Batrachier aus Süd-Amerika. Rev. Suisse Zool. Genève **25** 1917 (131–144). **12**

Beccari, N. Le cellule dei gangli spinali e simpatici in una grossa Tartaruga (*Testudo calcarata*). Monitore Zool. Ital. Firenze **28** 1917 (15–20) pls. ii.–iii. **13**

Boulenger, G. A. Les Batraciens Urodèles rapportés au genre *Euproctus*, leurs rapports éthologiques et phylogéniques. Paris C.R. Acad. Sci. **164** 1917 (709–712) (801–805). **14**

Boulenger, G. A. Sur l'Évolution de l'appareil à venin des Serpents. Paris C.R. Acad. Sci. **165** 1917 (92–94). **15**

Boulenger, G. A. Considérations sur les Reptiles permo-triasiques de l'ordre des Cotylosauriens. Paris C.R. Acad. Sci. **165** 1917 (456–459). **16**

Boulenger, G. A. Sur la conformation des phalangettes chez certaines Grenouilles d'Afrique. C.R. Acad. Sci. **165** 1917 (987–990). **17**

Boulenger, G. A. On the variation of the Common Lizard, *Lacerta vivipara*. J. Zool. Res. London **2** 1917 (1–16). **18**

Boulenger, G. A. A revision of the Lizards of the genus *Nucras*. Cape Town Ann. S. Afric. Mus. **13** 1917 (195–216) pls. vi. vii. **19**

Boulenger, G. A. Description of a new South African Lizard of the genus *Eremias*. Cape Town Ann. S. Afric. Mus. **13** 1917 (217–219). **20**

Boulenger, G. A. On a second species of the Batrachian genus *Amphodus*. Ann. Mag. Nat. Hist. London ser. 8 **20** 1917 (184–185). **21**

Boulenger, G. A. Description of a new Lizard and two new Frogs discovered in West Africa by Dr. H. G. F. Spurrell. Ann. Mag. Nat. Hist. London ser. 8 **19** 1917 (407–409). **22**

Boulenger, G. A. Descriptions of new Lizards of the Family Lacertidae. Ann. Mag. Nat. Hist. London ser. 8 **19** 1917 (277–279). **23**

Boulenger, G. A. Descriptions of new Frogs of the genus *Rana*. Ann. Mag. Nat. Hist. London ser. 8 **20** 1917 (413–414). **24**

Boulenger, G. A. On the use of the names Plesiosauria and Sauropterygia. London Proc. Zool. Soc. **1917** (221–222). **25**

Boulenger, G. A. Remarks on the Midwife Toad (*Alytes obstetricans*), with reference to Dr. P. Kammerer's publications. Ann. Mag. Nat. Hist. London ser. 8 **20** 1917 (173–184). **26**

Brèthes, J. Description d'un nouveau Colubridae Aglypha de la République Argentine, *Zamenis argentinus* Brèthes sp. n. Physis Rev. Soc. Argent. Ci. Nat. **3** 1917 (92–94). **27**

Brimley, C. S. The two forms of Red *Spelerpes* occurring at Raleigh, N.C. Washington Proc. Biol. Soc. **30** 1917 (87–88). **28**

Broom, R. and **Haughton,** S. H. Some new species of Anomodontia (Reptilia). Cape Town Ann. S. Afric. Mus. **12** 1917 (119–125). **29**

Caius, F. *vide* Phisalix, M.

Camp, C. L. Notes on the local distribution and habits of the Amphibians and Reptiles of south-eastern California in the vicinity of the Turtle Mountains. Berkeley Univ. Cal. Pub. Zool. **12** 1916 (503–544). **30**

Camp, C. L. Note on the systematic status of the Toads and Frogs of California. Berkeley Univ. Cal. Pub. Zool. **17** 1917 (115–125). **31**

Camp, C. L. *Spelerpes platycephalus*, a new Alpine Salamander from the Yosemite National Park, California. Berkeley Univ. Cal. Pub. Zool. **17** 1916 (11–14). **32**

Camp, C. L. Description of *Bufo canorus*, a new Toad from the Yosemite National Park. Berkeley Univ. Cal. Pub. Zool. **17** 1916 (59–62). **33**

Camp, C. L. The subspecies of *Sceloporus occidentalis*. Berkeley Univ. Cal. Pub. Zool. **17** 1916 (63–74). **34**

Case, E. C. The environment of the Amphibian Fauna at Linton, Ohio. Amer. J. Sci. New Haven Conn. **44** 1917 (124–136). **35**

Chabanaud, P. Description d'un Lacertilien nouveau du Maroc. Bull. Muséum Paris **1917** (3–6). **36**

Chabanaud, P. Sur divers Reptiles de Kebili (Sud-Tunisien) recueillis par M. le Commandant Vibert. Bull. Muséum Paris **1916** (226–227). **37**

Chabanaud, P. Sur divers Reptiles et Batraciens du Maroc recueillis par M. Pallary. Bull. Muséum Paris **1916** (228–233). **38**

Chabanaud, P. Énumération des Ophidiens non encore étudiés de l'Afrique occidentale, appartenant aux Collections du Muséum, avec la description des espèces et des variétés nouvelles. Bull. Muséum Paris **1916** (362–383). **39**

Chabanaud, P. Revision du Genre *Prosymna* Gray. Bull. Muséum Paris **1916** (433–440). **40**

Chabanaud, P. Note complémentaire sur les Ophidiens de l'Afrique occidentale, avec la description d'une espèce nouvelle. Bull. Muséum Paris **1917** (7–14). **41**

Dantschakoff, W. Ueber die Entwicklung des Blutes in den Blutbildungs organen bei *Tropidonotus natrix*. Arch. Mikr. Anat. Bonn **1916** (88 pp.) 4 pls. **42**

Delsman, H. C. De gastrulatie van *Rana esculenta* en van *Rana fusca*. [The gastrulation of *Rana esculenta* and of *Rana fusca*.] Amsterdam Versl. Wis. Nat. Afd. K. Akad. Wet. **25** [1916] (780–794) (Dutch); Amsterdam Proc. Sci. K. Akad. Wet. **19** 1917 (906–920) (English). **43**

Depéret, C. Monographie de la Faune de Mammifères Fossiles du Ludien inférieur d'Euzet-les-bains (Gard). Reptiles. Ann. Univ. Lyon **40** 1917 (250–254). **44**

Despott, G. I nostri rettili. J. Malta Sci. Soc. **2** 1914 (93–96). **45**

Dollo, L. Sur la découverte de Téléosauriens tertiaires au Congo. Rev. Zool. Africaine Bruxelles **4** 1915 (210–220). **46**

Douthitt, H. Eryops. Eryopsoides gen. nov. from the New Mexico Permian. Kansas Univ. Sci. Bull. **10** 1917 (237–241). **47**

Dunn, E. R. The Salamanders of the genera Desmognathus and Leucognathus. Washington U.S. Nat. Mus. Proc. **53** 1917 (393–433). **48**

Dunn, E. R. *vide* Fowler, H. W.

Edwards, D. J. A study of the anatomy and the vasomotor phenomena of the sympathetic nervous system in the turtle. Amer. J. Physiol. Boston **33** 1914 (229–252). **49**

Fowler, H. W. and **Dunn,** E. R. Notes on Salamanders. Philadelphia Proc. Acad. Nat. Sci. **69** 1917 (7–28). pls. iii.-iv. **50**

Fry, D. B. Description of *Aphantophryne*, a new Batrachian genus from New Guinea. Sydney Proc. Linn. Soc. N.S. Wales **1916** (770–786) pls. liv–lv. **51**

Gaige, H. T. Description of a new Salamander from Washington. Occ. Pap. Mus. Zool. Univ. Michigan **40** 1917 (3 pp.) 1 pl. **52**

Garman, S. The Galapagos Tortoises. Cambridge Mass. Mem. Mus. Comp. Zool. **30** No. 4 1917 (261–296) 42 pls. **53**

Gatenby, J. B. Note on the Sex of a Tadpole raised by Artificial Parthenogenesis. Q. J. Miscrosc. Sci. London **62** 1917 (213–216). **54**

Gibson, R. B. *vide* **Ruth,** E. G.

Gilmore, C. W. The Fossil Turtles of the Uinta formation. Pittsburg Mem. Carnegie Mus. **7** 1916 (101–161) pls. xviii–xxvii. **55**

Griffin, L. E. A catalog of the Ophidia from South America at present (June, 1916) contained in the Carnegie Museum, with descriptions of some new species. Pittsburg Mem. Carnegie Mus. **7** 1916 (163–227) pl. xxviii. **56**

Griffin, L. E. A List of the South American Lizards of the Carnegie Museum, with description of four new species. Pittsburg Ann. Carnegie Mus. **11** 1917 (304–320) pls. xxxii–xxxv. **57**

Griffin, L. E. *Leptodeira albofusca* (Lacepède) a synonym of *Leptodeira annulata* (Linnaeus). Pittsburg Ann. Carnegie Mus. **11** 1917 (321–326). **58**

Griffin, L. E. A Synopsis of the Saurian Genus *Prionodactylus*. Pittsburg Ann. Carnegie Mus. **11** 1917 (428–429). **59**

Hammer, E. Demonstratie van een reconstructiemodel van het centraal zenuwstelsel van Rana mugiens. [Demonstration eines Reconstructionsmodells des zentralen Nervensystems von Rana mugiens.] Amsterdam Werk. Gen. Nat. Gen. Heelk. **8** 1917 (654–658). **60**

Haughton, S. H. Investigations in South African Reptiles and Amphibians. 10. Descriptive catalogue of the Anomodontia. Cape Town Ann. S. Afric. Mus. **12** 1917 (127–174) pls. xvi–xviii. **61**

Haughton, S. H. *vide* **Broom,** R.

Hay, O. P. On a collection of fossil Vertebrates made by Dr. F. W. Cragin in the Equus Beds of Kansas. Sci. Bull. Kansas Univ. **10** 1917 (39–51) pls. i–iii. **62**

Herlant, M. Le mécanisme de la parthénogenèse expérimentale chez les Amphibiens et les Echinodermes. Bull. Sci. France Belgique Paris **50** 1917 (381–424). **63**

Hernandez-Pachecho, E. Hallazgo de tortugas gigantescas en el Mioceno de Alcalá de Henares. Bol. Soc. Esp. Hist. Nat. Madrid **17** 1917 (194–202). **64**

Hesser, C. Om sköldpaddlungans utveckling. Bidrag tiu lösningen av lungprablemet. [Über die Entwicklung der Schildkrätenlunge. Beitrag zur Lösung des Lungenproblems.] Stockholm Sv. Läkares Handl. **42** 1916 (980–1016; deutsches Res. 1014–1016) 2 pls. **65**

Hoepen, E. C. N. van. *Note on Myriodon* and *Platycranium*. Pretoria Ann. Trans. Mus. **5** 1917 (217). **66**

Hooley, R. W. On the integument of *Iguanodon bernissartensis* Boulenger and of *Morosaurus becklesii* Mantell. Geol. Mag. London (6) **4** 1917 (148–150) pl. x. **67**

Hutchinson, H. N. Observations on the reconstructed skeleton of *Diplodocus Carnegiei* as set up by Dr. W. J. Holland in the Natural History Museum in London. Geol. Mag. London (6) **4** 1917 (356–370) pls. xxii–xxiii. **68**

Jordan, H. E. The history of the primordial germ-cells in the Loggerhead Turtle embryo. Washington Proc. Acad. Sci. **3** 1917 (271–275). **69**

Krizenecky, J. Ein Fall von Hermaphroditismus bei *Triton cristatus* und einige Bemerkungen zur Frage der schnellen Differenzirung. Arch. Entw. Mech. Leipzig **1917** (20 pp.) 1 pl. **70**

Lambe, L. M. On *Cheneosaurus tolmanensis*, a new genus and species of Trachodont Dinosaur from the Edmonton Cretaceous of Canada. Ottawa Nat. **30** 1917 (117–123) pls. vi, vii. **71**

Lambe, L. M. A new genus and species of crestless Hadrosaur from the Edmonton Formation of Alberta. Ottawa Nat. **31** 1917 (65–73) pls. ii, iii. **72**

Lambe, L. M. The Cretaceous Theropodous Dinosaur Gorgosaurus. Canada Geol. Surv. Memoir **100** (Geol. Ser. 83). Ottawa **1917** (iii + 84 pp.). **73**

Lange, S. J. **de.** Das Hinterhirn, das Nachhirn und das Rückenmark der Reptilien. Folia neuro-biologica Haarlem **10** 1917 (385–422). **74**

Leffler, O. H. Zur Psychologie und Biologie des Axolotls. Halle **1915** (49 pp.) 2 pls. **75**

Maluquer, J. Sobre algunos reptiles de los alrededores de Melilla (Marruecos). Bol. Soc. Esp. Hist. Nat. Madrid **17** 1917 (428–432). **76**

Maluquer, J. Les Serps de Catalunya. Barcelona Mus. Barcinonensis Scient. Nat. Op. Ser. Zool. **7** 1917 (1–87) pls. i–viii. **77**

Mertens, R. Studien zur Systematik des Lacertiden. 1. Untersuchungen über die Variabilität der Italienischen Mauereideschen. Leipzig **1915** (118 pp.) 24 pls. **78**

Moodie, R. L. *vide* **Williston,** S. W.

Noble, G. K. *vide* **Barbour,** T.

O'Donoghue, C. H. A note on the ductus caroticus and ductus arteriosus and their distribution in the Reptilia. J. Anat. London **51** 1917 (137–152) **79**

Osawa, G. Beiträge zur vergleichenden mikroskopischen Anatomie der Wirbeltiere. II. Mitt.: Verdauungsorgane der Urodelen und Gymnophionen. Tokyo Mitt. med. Fak. **18** 1917 (443–596) 25 pls. **80**

Osborn, H. F. Skeletal Adaptations of *Ornitholestes*, *Struthiomimus*, *Tyrannosaurus*. N. York Bull. Amer. Mus. Nat. Hist. **35** 1917 (733–771) pls. xxiv. xxvii. **81**

Peracca, M. G. Sopra una nuova specie di Lacertide del gen. *Algiroides* dell'Uganda. Torino Atti. Acad. Sci. **52** 1917 (351–354). **82**

Pettit, A. Mycose chez une Tortue de mer (*Thalassochelys caretta* L.) Bull. Inst. Ocean. Monaco **336** 1917 (4 pp.). **83**

Phisalix, M. Sur la valeur subjective de l'évolution de l'appareil venimeux des serpents et de l'action physiologique des venins dans la systématique. Paris C.R. Acad. Sci. **165** 1917 (121–123). **84**

Phisalix, M. Sur la glande parotide venimeux des Colubridés aglyphes et sur l'existence de cette glande chez des espèces appartenant aux Boidés et aux autres familles de Serpents qui s'y rattachent. Paris C.R. Acad. Sci. **164** 1917 (959–962). **85**

Phisalix, M. et **Caius,** F. Sur les propriétés venimeuses de la sécrétion parotidienne des espèces de Serpents appartenant aux Boidés et aux Uropeltidés. Paris C.R. Acad. Sci. **165** 1917 (35–37). **86**

Pope, P. H. The introduction of West Indian Anura into Bermuda. Cambridge Mass. Bull. Mus. Comp. Zool. **61** 1917 (119–131) 2 pls. **87**

Rabl, C. Ueber die Muskeln und Nerven der Extremitaten von *Iguana tuberculata*. Anat. Hefte Wiesbaden **1916** (109 pp.) 5 pls. **88**

Ramsden, C. T. *vide* **Barbour,** T.

Rao, C. R. N. On the occurrence of iridocytes in the larva of *Microhyla inornata* Bouleng. Rec. Ind. Mus. Calcutta **13** 1917 (281–292). **89**

Redfield, A. C. The reactions of the melanophores of the Horned Toad. Washington Proc. Acad. Sci. **3** 1917 (202–203). **90**

Redfield, A. C. The co-ordination of the melanophore reactions of the Horned Toad. Washington Proc. Acad. Sci. **3** 1917 (204–205). **91**

Retterer, E. De l'ossification enchondrale chez le Triton. Paris C.R. Soc. Biol. **1917** (291–294). **92**

Risser, J. Olfactory reactions in amphibians. J. Exp. Zool. Philadelphia **16** 1914 (617–652). **93**

Rooy, N. **de.** The Reptiles of the Indo-Australian Archipelago. II. Ophidia. Leiden (E. J. Brill) **1917** (334 pp.). **94**

Ruth, E. S. and **Gibson,** R. B. Disappearance of the pigment in the melanophore of Philippine House Lizards. Philippine J. Sci. Manila Sect. B. **12** 1917 (181–188). **95**

Ruthven, A. G. Description of a new species of *Eleutherodactylus* from Colombia. Ann. Arbor. Occ. Pap. Mus. Zool. Univ. Michigan **34** 1917 (4 pp.) 1 pl. **96**

Ruthven, A. G. Two new species of *Eleutherodactylus* from Colombia. Ann. Arbor. Occ. Pap. Mus. Zool. Univ. Michigan **39** 1917 (6 pp.) 1 pl. **97**

Ruthven, A. G. A new Amphibian of the genus *Eleutherodactylus* from the Santa Marta Mountains, Colombia. Ann. Arbor. Occ. Pap. Mus. Zool. Univ. Michigan **43** 1917 (3 pp.) 1 pl. **98**

Ruthven, A. G. On the occurrence of *Bufo fowleri* in Michigan. Ann. Arbor. Occ. Pap. Mus. Zool. Univ. Michigan **47** 1917 (5 pp.) 1 pl.

Ruzicka, V. Beschleunigung der Häutung (bei Tritonen) durch Hunger. Arch. Entw. Mech. Leipzig **1917** (40 pp.) 1 pl. **100**

Ry van Beest Holle, Ch. L. **du.** Mededeeling over eenige afwykingen in het veneuse stelsel van en over abnormale ovariaalvorming by *Rana esculenta.* [Mitteilung über einige Abweichungen im venösen System von und über abnorme Ovarialbildung bei *Rana esculenta.*] Helder Tydschr. Ned. Dierk. Ver. **16** (Ser. 2) 1917 (XIX–XX). **101**

Schmalhausen, J. On the dermal bones of the shoulder-girdle of the Amphibia. Rev. Zool. Russe Moscou **2** 1907 (102–110). **102**

Schmalhausen, J. On the extremities of *Ranidens sibiricus* Kessler. Rev. Zool. Russe Moscou **2** 1917 (129–135). **103**

Schmidt, W. J. Studien am Integument der Reptilien. VII. Bau und Entwicklung der Eidechsenkrallen. Zool. Jahrb. Jena **1916** (100 pp.) 5 pls. **104**

Schmidt, W. Studien am Integument der Reptilien. Ueber die Haut der Acrochordinen. Zool. Jahrb. Jena **1917** (48 pp.) 2 pls. **105**

Shuler, E. W. Dinosaur Tracks in the Glen Rose Limestone, Texas. Amer. J. Sci. New Haven **44** 1917 (294–298). **106**

Sinclair, W. J. A new labyrinthodont from the Triassic of Pensylvania. Amer. J. Sci. New Haven Conn. **43** 1917 (319–321). **107**

Smith, B. G. Notes on the late history of the germinal vesicle in *Cryptobranchus allegheniensis.* Rep. Mich. Acad. Sci. Lansing **17** 1916 (73–75). **108**

Smith, B. G. The process of ovulation in Amphibia. Rep. Mich. Acad. Sci. Lansing **18** 1916 (102–105). **109**

Smith, M. A. Description of new Reptiles and a new Batrachian from Siam. J. Nat. Hist. Soc. Siam **2** 1917 (221–225). **110**

Smith, M. A. A list of the Batrachians at present known to inhabit Siam. J. Nat. Hist. Soc. Siam **2** 1917 (226–231) (256). **111**

Smith, M. A. Preliminary diagnoses of four new Sea-Snakes. J. Nat. Hist. Soc. Siam **2** 1917 (340–342). **112**

Smith, M. A. On Tadpoles from Siam. J. Nat. Hist. Soc. Siam **2** 1917 (261–281) 2 pls. **113**

Smith, M. A. A new Snake and a new Frog from Siam. J. Nat. Hist. Soc. Siam **2** 1917 (276–278). **114**

Snyder, J. O. Notes on Hawaian Lizards. Washington Proc. U.S. Nation. Mus. **54** 1917 (19–25). **115**

Stefano, G. de. Le Tartarughe fossili della famiglia Ptychogasteridae et la classificazione delle Cryptodira Clidosterna. Atti. Soc. Ital. Mus. Civ. st. nat. Milano **55** 1917 (278–288). **116**

Steineger, L. A new species of Horned Tree-toad from Panama. Washington Proc. Biol. Soc. **30** 1917 (33–34). **117**

Steineger, L. Cuban Amphibians and Reptiles collected for the United States National Museum from 1899 to 1902. Washington U.S. Nat. Mus. Proc. **53** 1917 (259–291). **118**

Sternberg, C. M. Notes on the feeding habits of two Salamanders in captivity. Ottawa Nat. **30** 1917 (129–130).

Swingle, W. W. The accessory chromosome in a Frog possessing marked hermaphroditic tendencies. Biol. Bull. Woods Hole **33** 1917 (70–90). **120**

Swingle, W. W. Experiments with feeding thymus glands to Frog larvae. Biol. Bull. Woods Hole **33** 1917 (116–132). **121**

Tagliaferro, N. On the occurrence of a new gigantic land Tortoise at Conadino, Malta. J. Malta Sci. Soc. **2** 1914 (76–79). **122**

Taylor, E. H. *Brachymeles*, a genus of Philippine Lizards. Philippine J. Sci. Manila D. **12** 1917 (267–279) 1 pl. **123**

Thompson, J. C. The variation exhibited by *Thamnophis ordinatus* (Baird and Girard) a Garter Snake inhabiting the San Francisco Peninsula. Washington Proc. U.S. Nation. Mus. **52** 1917 (345–366). **124**

Trigt, H. van. De dermatomerie by de hagedis (Lacerta viridis) [Die Dermatomerie der Eidechse (Lacerta viridis)]. Rotterdam Verh. Bat. Gen. (2) **7** 1917 (1–136) 18 pls. **125**

Van Denburgh, J. Concerning the origin of the Soft-shelled Turtle. *Aspidonectes californiana*, Rivers. San Francisco Proc. Cal. Acad. Sci. **7** 1917 (33–35). **126**

van Denburgh, J. Notes on the Herpetology of Guam, Mariana Islands. San Francisco Proc. Cal. Acad. Sci. **7** 1917 (37–39). **127**

Waite, E. R. Results of the South Australian Museum – Expedition to Strzelecki and Cooper Creeks. Ophidia. Adelaide, Tr. R. Soc. S. Austral. **41** 1917 (435–440). **128**

Watson, D. M. S. A Sketch Classification of the Pre-Jurassic Tetrapod Vertebrates. London Proc. Zool. Soc. **1917** (167–186). **129**

Weese, A. O. An experimental study of the reactions of the Horned Lizard, *Phrynosoma modestum* Gir., a Reptile of the semi-desert. Biol. Bull. Woods Hole **32** 1917 (98–116). **130**

Wilder, I. W. On the breeding habits of *Desmognathus fusca*. Biol. Bull. Woods Hole **32** 1917 (13–20). **131**

Willich-Kressmann, M. Schuppenreste bei Sireniden. Jena **1916** (36 pp.) 1 pl. **132**

Williston, S. W. and **Moodie, R. L.** *Ogmodirus martinii*, a new Plesiosaur from the Cretaceous of Kansas. Kansas Univ. Sci. Bull. **10** 1917 (61–73) 5 pls. **133**

Wiman, C. Ein Plesiosaurierwirbel aus der Trias Spitzbergens. Upsala Bull. Geol. Inst. **13** : 2 1916 (223–226). **134**

Wiman, C. Neue Stegocephalensfinde aus dem Posidonomyaschiefes Spitzbergen. Upsala Bull. Geol. Inst. **13** 1916 (209–222) pls. xv–xvi. **135**

Wiman, C. Über die Stegocephalen *Tertrema* und *Lonchorhynchus*. Upsala Bull. Geol. Inst. **14** 1917 (229–240) pls. xi.–xiii. **136**

Woerdeman, M. W. Gebitsontwikkeling bei Reptiliën. Amsterdam Werk. Gen. Nat. Genees. Heelk. **8** (Ser. 2) 1916 (377–382). **137**

Zietz, F. R. Results of the South Australian Museum. Expedition to Strzelecki and Cooper Creeks. Lacertilia. Adelaide Tr. R. Soc. S. Austral. **41** 1917 (469–472). **138**

II.—SUBJECT INDEX.

STRUCTURE.

Nervous System.

Beccari, 13; Edwards, 49; Hammer, 60; Lange, 74; Rabl, 88.

Tegumentary System.

Integument; **Schmidt, 105; Trigt, 125**; scales; **Willich-Kressmann, 132**; claws; **Boulenger, 17; Schmidt, 104**; pigment; **Rao, 89.**

Myology.

Axt, 7; Fry, 51; Rabl, 88.

Osteology.

Fry, 51; Hutchinson, 68; Lambe, 71-73; Osborn, 81; Schmalhausen, 102-103; Wiman, 134-136.

Alimentary System.

Osawa, 80.

Circulatory System.

Archer, 6; O'Donoghue, 79; Ry van Beest Holle, 101.

Reproductive System.

Ry van Beest Holle, 101.

PHYSIOLOGY.

Reactions of *Phrynosoma*; **Weese, 130.**

Olfactory reactions; **Risser, 93.**

Vasomotor phenomena; **Edwards, 49.**

Extirpation of hypophysis; **Allen, 2.**

Effects of hunger on casting of skin; **Ruzicka, 100.**

Thymus feeding; **Swingle, 121.**

Glands; **Adler, 1.**

Venom; **Phisalix, 84, 85; Phisalix et Caius, 86.**

Melanophores; **Redfield, 90, 91; Ruth and Gibson, 95.**

DEVELOPMENT.

General.

Gastrulation; **Delsman, 43**; endochondral ossification; **Retterer, 92.**

Ovum and Oogenesis.

Herlant, 63; Jordan, 69; Smith, 108, 109; Swingle, 120.

Organogeny.

Blood; **Dantschakoff, 42.**

Lungs; **Hesser, 65.**

Limbs; **Schmalhausen, 103.**

Claws; **Schmidt, 104.**

Teeth; **Woerdeman, 137.**

Larvae.

Smith, 113.

ETHOLOGY.

Boulenger, 14, 16; Camp, 30; Case, 35; Leffler, 75; Pettit, 83; Pope, 87; Sternberg, 119; Wilder 131.

AETIOLOGY, TERATOLOGY.

Evolution of poison gland; **Boulenger, 15; Phisalix, 85**; evolution experiments; **Boulenger, 26.**

Variation; **Boulenger, 18; Mertens, 78; Thompson, 124.**

Abnormal circulation; **Archer, 6**; hermaphroditism, **Krizenecky, 70.**

Sex; **Gatenby, 54.**

FAUNAE.

A. Actual.

Palaearctic.

Europe; **Boulenger, 18**; Spain; **Maluquer, 77**; Malta; **Despott, 45**; Italy; **Mertens, 78**; Kashmir; **Annandale, 5**; Central Asia, **Boulenger, 24.**

Nearctic.

Dunn, 48; Fowler and Dunn, 50; Carolina, **Brimley, 28**; Washington, **Gaige, 52**; Michigan, **Ruthven, 99**; California, **Camp, 30-34; Thompson, 124; Van Denburgh, 126.**

Neotropical.

S. America; **Baumann, 12; Brèthes, 27; Griffin, 56-59; Ruthven, 96-98.**

Panama; **Steineger, 117.**

Antilles; **Barbour, 8, 9; Barbour and Noble, 10; Barbour and Ramsden, 11; Boulenger, 21; Steineger, 118.**

Galapagos; **Garman, 53.**

Ethiopian.

Africa; **Boulenger, 19, 20, 22-24; Chabanaud, 36-41; Maluquer, 76; Peracca, 82.**

Indian.

Continent; **Boulenger, 23-24; Smith, 110-114.**

Archipelago; **Annandale, 4; Rooy, 94; Taylor, 123; Van Denburgh, 127.**

Australian.

Australia; **Andersson, 3; Waite, 128; Zietz, 138.**

New Guinea, &c.; **Fry, 51; Rooy, 94.**

Hawaii; **Snyder, 115.**

B. FOSSIL.

Stefano, 116; Watson, 129.

Carboniferous; **Case, 35.**

Permian; **Douthitt, 47.**

Permian and Triassic; **Boulenger, 16; Broom and Haughton, 29; Haughton, 61.**

Triassic; **Sinclair, 107; Wiman, 134-136.**

Wealden; **Hooley, 67.**

Jurassic and Cretaceous; **Osborn, 81.**

Cretaceous; **Lambe 71-73; Williston and Moodie, 133.**

Tertiary; **Dollo, 46; Hay, 62; Tagliaferro, 122.**

Eocene; **Depéret, 44; Gilmore, 55.**

Miocene; **Hernandez Pachecho, 64.**

III.—SYSTEMATIC.

REPTILIA.

Arterial system, O'DONOGHUE **79.**

Prejurassic, classification, WATSON **129.**

Of Malta, DESPOTT **45**; of Africa, CHABANAUD **37, 38**; of Virgin Is., BARBOUR **8**; from Java, ANNANDALE **4.**

LACERTILIA.

Of Cuba, STEINEGER **118**; of S, America, GRIFFIN **57**; of California, CAMP **34**; of Guam VAN DENBURGH **127**; from C. Australia, ZIETZ **138.**

†*Placosaurus rugosus*, DEPÉRET **44.**

GECKONIDAE.

Of Hawaii, SNYDER **115.**

Gonatodes hasemani **sp. n.** Bolivia, GRIFFIN Ann. Carnegie Mus. **11** p. 304 pl. xxxii.

Gymnodactylus moerens **sp.n.** Morocco. CHABANAUD Bull. Mus. Paris **1916** p. 228 figs.; *G. intermedius* **sp. n.** Siam, SMITH J. Nat. Hist. Soc. Siam **2** p. 221.

Sphaerodactylus elegantulus **sp. n.** Antigua, BARBOUR Proc. Biol. Soc. Washington **30** p. 163.

IGUANIDAE.

Anolis steinbachi **sp. n.** Bolivia, GRIFFIN Ann. Carnegie Mus. **11** p. 308 pl. xxxiii; *A. mestrei* **sp. n.** Cuba, BARBOUR and RAMSDEN Proc. Biol. Soc. Washington **29** p. 19.

Cyclura caymanensis p. 148 pl. iii, Cayman Is. *inornata* p. 151 pl. xiv, *nuchalis* p. 156 pl. viii figs. 1, 2, Bahamas *steinegeri* p. 163 pl. xii, Mona Isd. **spp.n.**, BARBOUR and NOBLE Bull. Mus. Comp. Zool. **60**; *C. pinguis* **sp. n.** Virgin Is., BARBOUR Proc. Biol. Soc. Washington **30** p. 100.

Phrynosoma modestum habits, reactions, WEESE **130.**

Sceloporus occidentalis taylori **subsp. n.** California. CAMP Univ. Calif. Publ Zool. **17** p. 66.

TEIIDAE.

Prionodactylus albostrigatus Minas Geraes p. 316 pl. xxxiv, *eigenmanni* Bolivia p. 310 pl. xxxv, **spp. n.**, GRIFFIN Ann. Carnegie Mus. **11.**

LACERTIDAE.

Algiroides boulengeri sp. n. Uganda, PERACCA Atti. Accad. Torino **52** p. 351.

Eremias adramitana sp. n. Arabia, BOULENGER Ann. Mag. N.H. (8) **19** p. 279; *E. aspera* sp. n. S. Africa, BOULENGER Ann. S. Africa. Mus. **13** p. 217.

Ichnotropis tanganicana sp. n. Tanganyika, BOULENGER Ann. Mag. N. H. (8) **19** p. 278.

Lacerta viridis var. *woosnami* var. n. Persia, BOULENGER t.c. p. 277 figs.; *L. muralis* variation, MERTENS **78**; *L. vivipara* variation, BOULENGER **18**.

Nucras revision, BOULENGER **19**.

Prionodactylus synopsis of spp., GRIFFIN **59**.

SCINCIDAE.

Of Hawaii, SNYDER **115**.

Brachymeles elerae p. 273 pl. i, fig. 4 *burksi* p. 275 pl. i fig. 5, spp. n., Philippines, TAYLOR Philippine J. Sci. D. **12**.

Chalcides trifasciatus sp. n. Morocco, CHABANAUD Bull. Mus. Paris **1917** p. 3 figs.; *C. boulengeri*, CHABANAUD **37**.

Lygosoma koratense sp. n. Siam, SMITH J. Nat. Hist. Soc. Siam **2** p. 222; *L. spurrelli* sp. n. Ashantee, BOULENGER Ann. Mag. N.H. (8) **19** p. 407.

OPHIDIA.

Of Catalonia, MALUQUER **77**; of Cuba, STEINEGER **118**; of S. America, GRIFFIN **56**; of Malay Archipelago, ROOY **94**; of Africa, CHABANAUD **39**, **41**.

GLAUCONIIDAE.

Glauconia monticola sp. n. Congo p. 366 figs., *bicolor gruveli* subsp. n. Dahomey, CHABANAUD Bull. Mus. Paris **1916** *G. boueti* sp. n. Soudan, CHABANAUD Bull. Mus. Paris **1917** p. 9 figs.

TYPHLOPIDAE.

Helminthophis bondensis sp.n. Colombia, GRIFFIN Mem. Carnegie Mus. **7** p. 165.

Typhlops dubius p. 364 figs. *rufescens* p. 365 figs. spp. n. Congo, CHABANAUD Bull. Mus. Paris **1916**.

BOIDAE.

Aspidites ramsayi, melanocephalus, WAITE **128**.

COLUBRIDAE.

Aparallactus nigrocollaris sp. n. p. 377 figs. *roncheti* var. n. p. 378 figs. Congo, CHABANAUD Bull. Mus. Paris **1916**.

Aporophis melanocephalus sp. n. Bolivia, GRIFFIN Mem. Carnegie Mus. **7** p. 171.

Atractus taeniatus sp. n. Bolivia, GRIFFIN Mem. Carnegie Mus. **7** p. 173 pl. xxviii figs. 1–3.

Calamaria elegans p. 158, *simalurensis, lautansis* p. 159, spp. n. Simalur, DE ROOY Reptiles I.A. Archip.

Cephalosimus subgen. n. (*Simocephalus*) *insignis* sp. n. Congo, CHABANAUD Bull. Mus. Paris **1916** p. 369 figs.

Chamaetortus aulicus Ellenbergeri var. n. Congo, CHABANAUD t.c. p. 375 figs.

Chlorophis heterodermus pobeguini subsp. n. Guinea, CHABANAUD t.c. p. 371.

Clelia euprepa p. 203 pl. xxviii figs. 7–9 Bolivai, *peruviana* p. 204 Peru spp. n., GRIFFIN Mem. Carnegie Mus. **7**.

Dipsadomorphus Boueti sp. n. Guinea, CHABANAUD Bull. Mus. Paris **1916** p. 373 fig.

Elaps colombianus p 216, *hollandi* p. 218 pl. xxviii figs. 10–12, spp. n. Colombia, GRIFFIN Mem. Carnegie Mus. **7**.

Hydrophis lamberti, rostralis p. 340, *consobrinus, siamensis* p. 341, spp. n., Siam and Perak, SMITH J. Nat. Hist. Soc. Siam **2**.

Leptodeira albofusca = *annulata*, GRIFFIN Ann. Carnegie Mus. **11** p. 321.

Liophis elaeoides sp. n. Bolivia, GRIFFIN Mem. Carnegie Mus. **7** p. 187.

Lycodon florensis sp. n. Flores, DE ROOY, Reptiles I.A. Archipelago p. 110.

Prosymna revision, CHABANAUD **40**.

Rhadinaea orina sp. n. Bolivia, GRIFFIN, Mem. Carnegie Mus. **7** p. 195.

Rouleophis **gen. n.** *chevalieri* **sp. n.** Guinea, CHABANAUD Bull. Mus. Paris **1916** p. 379 figs.

Simotes longicauda joynsoni **subsp. n.** Siam, SMITH J. Nat. Hist. Soc. Siam **2** p. 276.

Thamnophis ordinatus variation, THOMPSON **124.**

Tropidodipsas spilogaster **sp. n.** Bolivia, GRIFFIN Mem. Carnegie Mus. **7** p. 197 pl. xviii figs. 4–6.

Zamenis argentinus **sp. n.** Argentina, BRÈTHES Rev. Soc. Argent. Ci. Nat. **3** p. 93 fig.

VIPERIDAE.

Vipera russelli siamensis **subsp. n.** Siam, SMITH J. Nat. Hist. Soc. Siam **2** p. 223.

†PLESIOSAURIA.

†*Plesiosauria* and †*Sauropterygia*, use of names, BOULENGER **25.**

Vertebrae, Triassic, Spitsbergen, WIMAN **134.**

†*Ogmodirus martinii*, WILLISTON & MOODIE **133.**

CROCODILIA.

†*Congosaurus*, DOLLO **46.**

Crocodilus acutus, rhombifer, STEINEGER **118.**

†DINOSAURIA.

†*Cheneosaurus* **gen. n.** *tolmanensis* **sp. n.** Cretaceons of Alberta, LAMBE Ottawa Nat. **30** p. 118 pls. vi vii.

†*Diplodocus carnegiei*, HUTCHINSON **68.**

†*Edmontosaurus* **gen. n.** *regalis* **sp. n.** Cretaceons, Alberta, LAMBE Ottawa Nat. **31** p. 66 pls. ii iii.

†*Eubrontes titanopelopatidus* **sp. n.** Glen Rose Limestone, Texas, SHULER Amer. J. Sci. **44** p. 298 fig.

†*Gorgosaurus* **gen. n.** *libratus* **sp. n.** Cretaceous, Canada, LAMBE Canada Geol. Surv. Mem. **100.**

†*Iguanodon bernissartensis* integument, HOOLEY **67.**

†*Morosaurus becklesii* integument, HOOLEY **67.**

†*Struthiomimus* **gen. n.** type *Ornithomimus altus* Lambe, OSBORN Bull. Amer. Mus. **35** p. 733.

†*Orintholestes* skeleton, OSBORN t.c.

†*Tyrannosaurus* skeleton, OSBORN t.c.

CHELONIA.

Development of lungs, HESSER **65.**

Aspidonectes californiana, VAN DENBURGH **126.**

†*Baena inflata* p. 112 pl. xix, *gigantea* p. 116 pl. xx, *platyplastra* p. 120 pl. xviii fig. 2 **spp. n.** Eocene of Uinta, GILMORE Mem. Carnegie Mus. **7.**

†*Echmatemys douglassi* p. 128 pl. xxii, *hollandi* p. 133 pl. xxiii fig. 1, *obscura* p. 135 pl. xxiv, *depressa* p. 139 pl. xxiii fig. 2 **spp. n.** Eocene of Uinta, GILMORE t.c.

†*Hadrianus robustus* p. 146 pl. xxv, *utahensis* p. 148 pl. xxvi **spp. n.** Eocene of Uinta, GILMORE t.c.

†*Ptychogasteridae*, STEFANO **116.**

Testudo Miocene of Alcala, HERNANDEZ-PACHECHO **64**; *T. uintensis* **sp. n.** Eocene of Uinta, GILMORE Mem. Carnegie Mus., **7** p. 150 pl. xxvii; *T. equicomes* **sp. n.** Tertiary of Kansas, HAY Kansas Univ. Sci. Bull. **10** p. 40 pl. iii fig. 1; *T. macrophyes* p. 273 pls. iii–v, *clivosa* p. 283 pl. xxi, *typica* p. 285 pls. xxii xxxiv **spp. n.** Galapagos, GARMAN Mem. Mus. Comp. Zool. **30**; *T. robustissima* **sp. n.** Malta, TAGLIAFERRO J. Malta Sci. Soc. **2** p. 76.

†COTYLOSAURIA.

BOULENGER **16.**

†ANOMODONTIA.

Of S. Africa, HAUGHTON Ann. S. Afric. Mus. **12** pp. 127–174 pls. xvi–xviii.

†*Chelyrhynchus* **gen. n.** *lachrymalis* **sp. n.** S. Africa, HAUGHTON t.c. p. 156 figs.

†*Myosaurus* **gen. n.** *gracilis* **sp. n.** S. Africa, HAUGHTON t.c. p. 164.

†*Polytsrasaurus* **gen. n.** *natalenssi* **sp. n.** S. Africa, HAUGHTON t.c. p. 167.

†*Dicynodon cyclops* p. 131 *grandis* p. 140 **spp. n.** S. Africa, HAUGHTON t. c. ;† *D. corstorphinei* p. 119, *cavifrons* p. 120, *rogersi* p. 121, *pygmaeus* p. 123 **spp. n.** S. Africa, BROOM & HAUGHTON Ann. S. Afric. Mus. **12.**

†*Emydops platyceps* **sp. n.** S. Africa, BROOM & HAUGHTON t.c. p. 124.

†*Platycraniellus* **nom. n.**=†*Platycranium* (preocc.), HOEPEN Ann. Transvaal Mus. **5** p. 217.

BATRACHIA.

Shoulder girdle, SCHMALHAUSEN **102.**

Prejurassic, classification, WATSON **129.**

Of Carboniferons of Ohio, CASE **35.**

Of Cuba, STEINEGER **118** ; of California, CAMP **30, 31** ; of Virgin Is., BARBOUR **8** ; of Siam, SMITH **111.**

ECAUDATA.

From S. America, BAUMANN **12**; from Java, ANNANDALE **4** ; from Queensland, ANDERSSON **3** ; introduced into Bermuda, POPE **87.**

Tadpoles from Siam, SMITH **113.**

RANIDAE.

Nyctixalus robinsoni **sp. n.** Java, ANNANDALE J. Fed. Malay Mus. **7** p. 110.

Phrynixalus reginae **sp. n.** Queensland, ANDERSSON Stockholm Vet.-Ak. Handl. **52** No. 9 p. 4 figs.

Rana pleskii, ANNANDALE **5** ; *R. leonensis* **sp. n.** Gold Coast, BOULENGER Ann. Mag. N.H. (8) **19** p. 408 and **20** p. 418 ; *R. phrynoides* p. 413 Yunnan, *tibetana* p. 414 Tibet, *macrognathus* p. 414 Burma, *grahami* p. 415 Yunnan, *tarahumarae* p. 416 Mexico, *floweri* p. 417 Nile, **spp. n.** BOULENGER Ann. Mag. N.H. (8) **20** ; *R. cubitalis* **sp. n.** Siam, SMITH J. Nat. Hist. Soc. Siam **2** p. 277 ; *R. boylii muscosa* p. 118, *sierra* p. 120, **subspp. n.**, California, CAMP Univ. Calif. Publ. Zool. **17.**

Rappia spurrelli **sp. n.** Ashantee, BOULENGER Ann. Mag. N.H. (8) **19** p. 408.

ENGYSTOMATIDAE.

Aphantophryne **gen. n.** *pansa* **sp. n.** New Guinea, FRY Proc. Linn. Soc. N.S. Wales **1916** p. 772 pls. liv lv.

Callula mediolineata **sp. n.** Siam, SMITH J. Nat. Hist. Soc. Siam **2** p. 224.

CYSTIGNATHIDAE.

Crinia acutirostris **sp. n.** Queensland, ANDERSSON Stockholm Vet.-Ak. Handl. **52** No. 9 p. 8 fig.

Eleutherodactylus delicatus **sp. n.** Colombia, RUTHVEN Occ. Pap. Mus. Zool. Michigan **43** p. 1 pl. i ; *E sanctaemartae* p. 1 pl. i fig. 1, *megalops* p. 3 pl. i fig. 3, **spp. n.**, Colombia, RUTHVEN Occ. Pap. Mus. Zool. Michigan **39** ; *E. insignis* **sp. n.** Colombia, RUTHVEN Occ. Pap. Mus. Zool. Michigan **34** p. 1 pl. i.

BUFONIDAE.

Bufo canorus **sp. n.** California, CAMP Univ. Calif. Publ. Zool. **17** p. 59 figs. ; *B. turpis* **sp. n.** Virgin Is., BARBOUR Proc. Biol. Soc. Washington **30** p. 102 ; *B. fowleri*, RUTHVEN **99.**

Pseudophryne rugosa **sp. n.** Queensland, ANDERSSON Stockholm Vet.-Ak. Handl. **52** No. 9 p. 13 fig.

HYLIDAE.

Hyla nannotis p. 16 figs., *serrata* p. 17 fig., *tympanocryptis* p. 19 figs., **spp. n.**, Queensland, ANDERSSON Stockholm, Vet.-Ak. Handl. **52** No. 9.

Cerathyla panamensis **sp. n.** Panama, STEINEGER Proc. Biol. Soc. Washington **30** p. 31.

Microhyla inornata iridocytes, RAO **89.**

DISCOGLOSSIDAE.

Alytes obstetricans, breeding, evolution, BOULENGER **26.**

HEMIPHRACTIDAE.

Amphodus auratus **sp. n.** Trinidad, BOULENGER Ann. Mag. N.H. (8) **19** p. 185.

CAUDATA.

FOWLER & DUNN **50.**

Scales, WILLICH-KRESSMANN **132.**

Digestive organs, OSAWA **80.**

Amblystoma mexicanum, LEFFLER **75.**

Desmognathus revision, DUNN **48**; *D. fusca* breeding, WILDER **131.**

Plethodon wehrlei **sp. n.** Pennsylvania, FOWLER & DUNN Proc. Acad. Philadelphia **69** p. 23 pl. iv.

Ranidens sibiricus development of limbs, SCHMALHAUSEN **103**; *R. olympicus* **sp. n.** Washington, GAIGE Occ. Pap. Mus. Zool. Michigan **40** p. 2 pl. i.

Spelerpes ruber, montanus, BRIMLEY **28**; *S. platycephalus* **sp. n.** California, CAMP Univ. Calif. Publ. Zool. **17** p. 11.

APODA.

Ichthyophis glutinosus digestive organs, OSAWA **80.**

†STEGOCEPHALIA.

†*Calamops* **gen. n.** *paludosus* **sp. n.** Triassic Pennsylvania, SINCLAIR Amer. J. Sci. **43** p. 319 fig.

†*Eryopsoides* **gen. n.** type *Ophiacodon grandis* Marsh Permian of New Mexico, DOUTHITT Kansas Univ. Sci. Bull. **10** p. 241.

†*Lonchorhynchus* skull, WIMAN **135, 136.**

†*Lyrocephalus*, WIMAN **135.**

†*Pellostega* **gen. n.** *erici* **sp. n.** Trias of Spitzbergen, WIMAN Bull. Geol. Inst. Upsala **13** p. 210 pls. xv figs. 1–3 xvi fig. 1.

†*Tertrema* skull, WIMAN **136.**

†*Uranocentrodon* **nom. n.**=†*Myriodon* (preocc.) HOEPEN Ann. Transvaal Mus. **5** p. 217.

XVII. AVES

ARRANGED BY

W. L. SCLATER, M.A.

CONTENTS

	PAGE
I. Titles	5
II. Subject Index :—	
Comprehensive and General = 5803 :—	
History	32
Biography—General	32
,, Special	32
,, Obituary Notices	32
General Treatises	32
Bibliography	32
Institutions and Collections	32
Technique	32
Economics	32
Bird-protection	32
Acclimatization	32
Aviculture	33
Nomenclature	33
Phylogeny and Classification	33
Structure = 5807 :—	
Plumage and epithelial structures	33
Nervous system and Sense organs	33
Osteology	33
Circulatory and Glandular Systems	33
Respiratory System	33
Urinogenital System	33
General Anatomy of special forms	33
Physiology = 5811	33
Embryology = 5815	33
Ethology = 5819 :—	
General and Miscellaneous	33
Food habits	33
Migration, General	33
,, Regional Observations	33
,, Migration of Single Species or Groups	34
,, Bird-marking experiments and results	34

PAGE

Flight 34
Sexual relations and display 34
Nidification, General 34
" Regional Observations 34
" Observations on single species 34
Oology 34
Voice 34
Psychology 34
Colour and Moult.. 34
Pathology 34
Avian Parasitology 35
Mortality 35

Variation and Aetiology = 5823 :—
Variation 35
Teratology 35
Hybrids 35
Heredity and Evolution 35
Fossil and Extinct birds 35

Geography = 5827 :—
General 35
Palaearctic Region 35
Ethiopian Region 37
Indian Region 37
Australian Region 38
Neotropical Region 38
Nearctic Region 39
The Oceans 40

III. Systematic :—
Archæopteryges 40
Apterygiformes 40
Tinamiformes 40
Galliformes 40
Turniciformes 41
Pteroclidiformes 41
Columbiformes 41
Opisthocomiformes 42
Ralliformes 42
Podicipediformes 43
Colymbiformes 43
Sphenisciformes 43
Procellariiformes 43
Alciformes.. 43
Lariformes 43
Charadriiformes 44
Gruiformes 44
Ardeiformes 44
Palamedeiformes 45

PAGE

Anseriformes 45
Pelecaniformes 45
Accipitriformes 46
Strigiformes 47
Psittaciformes 47
Coraciiformes 48
Trogones 49
Coccyges 49
Scansores 50
Piciformes 50
Menuriformes 50
Passeriformes 50
Pteroptochidae.. 50
Conopophagidae 50
Formicariidæ 50
Dendrocolaptidæ 51
Tyrannidæ 52
Pipridae.. 52
Cotingidæ 52
Atrichornithidae 52
Hirundinidæ 52
Muscicapidæ 53
Campophagidæ 53
Pycnonotidæ 53
Timeliidæ 54
Troglodytidæ 54
Cinclidæ.. 55
Mimidæ 55
Turdidæ 55
Sylviidæ 56
Vireonidæ 57
Ampelidæ 57
Artamidæ 57
Laniidæ 57
Paridæ 57
Regulidæ 57
Sittidæ 57
Certhiidæ 57
Zosteropidæ 57
Dicæidæ 58
Nectariniidæ 58
Meliphagidæ 58
Mniotiltidæ 58
Drepanididæ 58
Motacillidæ 58
Alaudidæ 59
Fringillidæ 59
Cœrebidæ 60

PAGE

Passeriformes—*continued.*

Tanagridæ 60
Ploceidæ 60
Icteridæ 61
Sturnidæ 61
Eulabetidæ 61
Oriolidæ.. 61
Dicruridæ 61
Paradiseidæ 61
Corvidæ 61

I.—TITLES.

Adam, J. C. A pair of Long-eared Owls. Edinburgh Trans. Field Nat. & Micros. Soc. **7** 1915 (63-91) 2 photos. **1**

Alexander, C. J. Notes on zonal distribution in the mountains of Latium, Italy. Brit. Birds London **11** 1917 (74–82). **2**

Alexander, C. J. Observations on birds singing in their winter quarters and on migration. Brit. Birds London **11** 1917 (98-102). **3**

Alexander, H. G. Birds at Dungeness, 1916. Brit. Birds London **10** 1917 (263–266). **4**

Alexander, W. B. Procellariformes in Western Australia. Emu Melbourne **17** 1917 (40–42). **5**

Alexander, W. B. White-winged Black Terns in Western Australia: a remarkable visitation. Emu Melbourne **17** 1917 (95–100). **6**

Allard, H. A. The song of the Grasshopper Sparrow (*Ammodramus savannarum australis* Maynard). Science New York **45** 1917 (362). **7**

Anderson, J. C. New Zealand Bird-song: further notes. Wellington Trans. N. Zeal. Inst. **49** 1917 (519–530). **8**

Anderson, R. M. Preliminary list of specimens collected by the Canadian Arctic expedition, 1914–1916. Ottawa Sumry. Rep. Geol. Surv. for **1916** 1917 (376–381). **9**

Andrews, C. W. Report on the remains of Birds found in the Glastonbury Lake Village; in "The Glastonbury Lake Village" by A. Bulleid & H. St. G. Gray vol. ii. **1917** (631–637) 1 fig. **10**

Anfrie, E. Les anomalies et les variations individuelles parmi les oiseaux faisant partie de notre collection. Rev. Franç. d'Orn. **9** 1917 (113–116 137–142 158–162). **11**

[Anon.] Annual Report on the Birds of Epping Forest for the year 1916. London Trans. Nat. Hist. Soc. **1916** 1917 (90–97). **12**

[Anon.] Obituary. Mr. B. H. Woodward. Emu Melbourne **16** 1917 (197–198). **13**

[Anon.] Obituary. Edward Pearson Ramsay. Emu Melbourne **16** 1917 (241–243) portr. **14**

[Anon.] Obituary. A. J. North. Emu Melbourne **17** 1917 (59–60). **15**

A.O.U. Committee. Second annual list of proposed changes in the A.O.U. Check-list of North American birds. Auk Cambridge Mass. **34** 1917 (198–205). **16**

Arctander, H. Traek af fuglelivet Storehedinge. [Notes on bird life near Storeheding, Zealand.] Kjöbenhavn Ornith. Tids. **11** 1917 (5–16). **17**

Arldt, T. Die Ausbreitung der Vögel. Arch. Naturg. Berlin **81** Abt A. 12 Hft. 1916 (13–135). **18**

Arundel, W. B. [and others]. Breeding habits of Willow-Warbler and nesting sites at considerable heights from ground. Brit. Birds London **11** 1917 (88–92). **19**

Ashby, E. Field notes on *Acanthornis magnus* (Gld.) Scrub Tit or Great Tit. Adelaide S. Austr. Orn. **3** 1917 (10–12). **20**

Ashby, E. Tasmanian field-notes. Adelaide S. Austr. Orn. **3** 1917 (61–68). **21**

Ashby, E. Notes on a collecting trip in the Low North of South Australia. Emu Melbourne **16** 1917 (231–234). **22**

Ashby, E. Description of a new subspecies of *Platycercus elegans* (Gmelin). Emu Melbourne **17** 1917 (43–45). **23**

Astley, H. D. The Red-breasted Goose (*Bernicla ruficollis*). Avicult. Mag. London **8** 1917 (213–214) col. pl. **24**

Auel, H. Beobachtungen über die Potsdamer Vogelfauna und über das Erscheinen ihrer Zugvögel im Frühjahr. J. Ornith. Leipzig **65** 1917 (87–92). **25**

Bacmeister, W. Beitrag zur Avifauna von Ostpolen. Falco Halle **12** 1916. **26**

Bacmeister, W. Ueber *Parus salicarius*. J. Ornith. Leipzig **1917** Bd. ii. (1–4). **27**

Bacmeister, W. Einige Aufzeichnungen über die Vögel Nord-Serbiens. Orn. Jahrb. Hallein **27** 1916 (44–48). **28**

Bacmeister, W. Zum Vorkommen des Zaunammers (*Emberiza cirlus* L.) insbesondere in Nordostfrankreich. Orn. Monatsber. Berlin **25** 1917 (81–85). **29**

Bährmann, U. Ueber die Vögel der Umgebung von Ruhland. J. Orn. Leipzig **65** 1917 (468–506). **30**

Baily, W. S. Whydahs. Avicult. Mag. London **8** 1917 (129–133) photos. **31**

Baily, W. S. Some Rails and Gallinules. Avicult. Mag. London **9** 1917 (21–24) photos. **32**

Baily, W. S. Nesting of the Black-breasted Mexican Quail [*Colinus pectoralis*]. Bird-Notes Ashbourne **8** 1917 (21–23) 2 photos. **33**

Baily, W. S. The nesting of the White-cheeked Finch-Lark [*Pyrrhulauda leucotis*]. Bird-Notes Ashbourne **8** 1917 (133–135) 3 photos. **34**

Bailey, B. H. Description of a new subspecies of the Broad-winged Hawk. Auk Cambridge Mass. **34** 1917 (73–75). **35**

Bailey, F. M. Birds of the humid coast. Condor Hollywood Cal. **19** 1917 (8–13 46–54 95–101). **36**

Bailey, F. M. Red letter days in Southern California. Condor Hollywood Cal. **19** 1917 (155–159). **37**

Baker, E. C. S. The Game Birds of India, Burma and Ceylon. Pts. xxi, xxii. Bombay J. Nat. Hist. Soc. **25** 1917 (1–39 161–198) 2 col. pls. **38**

Baker, E. C. S. Notes on the nidification of some Indian Falconidae. Ibis London **1917** (224–241 350–362) 2 pls. **39**

Baker, E. C. S. Description of new subspecies of *Sylviparus, Parus, Garrulax, Eupetes, Pomatorhinus, Corythocichla, Stachyridopsis, Cyanoderma.* London Bull. B.O.C. **38** 1917 (7–10). **40**

Baker, E. C. S. Description of new subspecies of Bulbuls. London Bull. Brit. Orn. Cl. **38** 1917 (15–17). **41**

Baker, E. C. S. and **Jourdain,** F. C. R. Abnormal clutches of eggs in *Tringa hypoleuca*. London Bull. B.O.C. **37** 1917 (24–28). **42**

Bales, B. R. Another unusual laying of the Flicker (*Colaptes auratus luteus*). Wilson Bull. Oberlin Ohio **29** 1917 (188–191). **43**

Bangs, O. Notes on the geographical races of *Tangara gyroloides*. Cambridge Proc. N. Engl. Zool. Cl. **6** 1917 (73–76). **44**

Barnard, C. Bird-life as affected by drought. Emu Melbourne **16** 1917 (234–236). **45**

Barnard, H. G. *vide* Campbell.

Bartsch, P. Relationship of Florida Herons. Auk Cambridge Mass. **34** 1917 (86). **46**

Bartsch, P. Additions to the Haitian avifauna. Washington D.C. Proc. Biol. Soc. **30** (131–132). **47**

Bateson, W. and **Thomas,** R. H. Note on a Pheasant showing abnormal sex-characters. J. Genetics Cambridge **6** 1917 (163–164) 1 pl. **48**

Baxter, E. V. *vide* Rintoul.

Beaupre, E. The American Golden Plover in eastern Ontario. Ottawa Nat. **31** 1917 (29–31). **49**

Beck, R. H. Bird photographing on the Falkland Islands. Bird-life on the Falklands. New York Amer. Mus. Journ. **17** 1917 (429–460). **50**

Beebe, W., **Hartley,** G. I. and others. Tropical wild life in British Guiana. Zoological contributions from the tropical research station of the New

York Zoological Society. Vol. I (1–504), 143 pls. and figs. New York (N.Y. Zool. Soc.) **1917** 8vo. **51**

Begg, W. Autumn migration at Little Ross Lighthouse, Kirkcudbrightshire. Scot. Nat. Edinburgh **1917** (3–5). **52**

Begg, W. Siberian Chiffchaff (*Phylloscopus collybita tristis*) at Little Ross Lighthouse, Kirkcudbrightshire. Scot. Nat. Edinburgh **1917** (33). **53**

Bellchambers, T. P. Notes on the Mallee Fowl (*Leipoa ocellata rosinae*), No. 2. Adelaide S. Austr. Orn. **3** 1917 (78–81) text-fig. **54**

Bergtold, W. H. A study of the incubation periods of birds. What determines their lengths? (1–109). Denver (Kendrick-Bellamy) **1917** 8vo. **55**

Bergtold, W. H. Regurgitation in the Bohemian Waxwing. Auk Cambridge Mass. **34** 1917 (341–342). **56**

Bergtold, W. H. The birds of Denver. Wilson Bull. Oberlin Ohio **29** 1917 (113–129). **57**

Berlepsch, H. *Freiherr von.* Wichtige Beobachtungen im Paraguayischen Urwald. J. Ornith. Leipzig **65** Bd. ii 1917 (5–8). **58**

Berlioz, J. Sur les variations de plumage chez les oiseaux. I. Etude de l'*Halcyon albicillus* Cuv. et du *Chloropsis hardwicki* Jard. et Selby. Rev. Franç. d'Orn. Paris **9** 1917 (173–174). **59**

Berry, W. A chair of economic ornithology. Scot. Nat. Edinburgh **1917** (121–135). **60**

Bickerton, W. Notes on Birds observed in Hertfordshire during the year 1915. Watford Trans. Herts. Nat. Hist. Soc. **16** 1917 (141–156). **61**

Bishop, S. C. and **Wright,** A. H. Note on the Passenger Pigeon. Auk Cambridge Mass. **34** 1917 (208–209). **62**

Blaauw, F. E. Een en ander over bastaarden en Kleurslagen. [Einiges über Bastarde und Farbenvarietäten.] Ardea Leiden **6** 1917 (56–61). **63**

Blaauw, F. E. Some notes on the Black-faced Ibis (*Theristicus melanops*). Avicult. Mag. London **8** 1917 (146–148) photo. **64**

Blaauw, F. E. On the breeding of the Tropical Seed-Finch (*Oryzoborus torridus*). Avicult. Mag. London **9** 1917 (40–43). **65**

Blaauw, F. E. On the breeding of the South African Black Duck (*Anas sparsa*). Ibis London **1917** (69–71) 1 pl. **66**

Blaauw, F. E. *vide* Phillips.

Blagg, E. W. H. A blue-grey variety of the Rook. Avicult. Mag. London **8** 1917 (178–179). **67**

Blakeslee, A. F. *vide* Harris.

Boase, H. Observations on some habits of the Coot. Scot. Nat. Edinburgh **1917** (59–64). **68**

Bolam, G. Jottings from the east nook of Cumberland. Vasculum Hexham **3** 1917 (40–44). **69**

Bolam, G. Notes on the winter of 1916–17 in the Alston district. Vasculum Hexham **3** 1917 (78–82 110–114). **70**

Boring, A. M. and **Pearl,** R. Sex studies. IX. Interstitial cells in the reproductive organs of the chicken. Anat. Rec. Philadelphia **13** 1917 (253–268) 6 figs. **71**

Bouet et **Millet-Horsin.** Liste des oiseaux recueillis ou observés à la Cote d'Ivoire en 1906–1907 et en 1913–1914. Rev. Franç. d'Orn. Paris **9** 1917 (3–6). **72**

Bowles, J. H. Coloration of down in adult ducks. Auk Cambridge Mass. **34** 1917 (206–207). **73**

Bowles, J. H. Notes on the Kennicott's Screech Owl (*Otus asio kennicotti*) in the Puget Sound region. Auk Cambridge Mass. **34** 1917 (422–427). **74**

Bowles, J. H. The winter migration of 1916–17 in the Northwest. Condor Hollywood Cal. **19** 1917 (125–129) 2 photos. **75**

Bowles, J. H. Two new records for the State of Washington. Condor Hollywood Cal. **19** 1917 (187). **76**

Bowdish, B. S. *vide* Philipp.

Boyd, A. W. Birds of the Suez Canal zone and Sinai Peninsula. Ibis London **1917** (539–557). **77**

Boyle, H. S. Field notes on the Seriema (*Chunga burmeisteri*). Auk Cambridge Mass. **34** 1917 (294–296). **78**

Bradbury, W. C. Notes on the nesting habits of the Clarke Nutcracker in Colorado. Condor Hollywood Cal. **19** 1917 (149–155) 4 photos. **79**

Brasil, L. A mistake of Latham's. His so-called Sea-Eagle from Botany Island. Austr. Av. Rec. London **3** 1917 (109–112). **80**

Brasil, L. What is *Turdus minutus?* Forster, from Cook's "Botany Island." Ibis London **1917** (422–428). **81**

Brasil, L. Le nom de genre *Mesites*. Rectification. Rev. Franç. d'Orn. **9** 1917 (179–180). **82**

Braun, F. Beobachtungen an Kanarienbastarden. Danzig Schr. Nat. Ges. **14** 1917 (31–48). **83**

Braun, F. Ueber den Zusammenhang zwischen dem Temperament und den Gesangesäusserungen der Singvögel. J. Ornith. Leipzig **65** Bd ii 1917 (9–15). **84**

Braun, F. Ueber Gesängesäufserungen kranker und sterbender Vögel. Orn. Monatsber. Berlin **25** 1917 (1–4). **85**

Braun, F. Ueber den Einfluss längerer Gefangenschaft auf manche geistige und körperliche Eigenschaften der Stubenvögel. Ornith. Monatsber. Berlin **25** 1917 (49–55). **86**

Braun, F. Winterliche Beobachtungen aus Deutsch-Eylau. Orn. Monatsber. Berlin. **25** (103–107). **87**

Bretscher, K. Der Frühlingszug des Kukuks in der Schweiz. Zürich Vierteljahrsch. Natf. Ges. **62** 1917 (143–152). **88**

Brimley, C. S. Thirty-two years of bird migration at Raleigh, North Carolina. Auk Cambridge Mass. **34** 1917 (296–308). **89**

Brimley, C. S. Some known changes in the land vertebrate fauna of North Carolina. Chapel Hill N.C. J. Elisha Mitchell Sci. Soc. **22** 1917 (176–183). **90**

Brooks, A. Birds of the Chilliwack district, B.C. Auk Cambridge Mass. **34** 1917 (28–50) map. **91**

Brooks, W. G. The possibility of *Puffinus bermudae* Nichols and Mowbray in the north Atlantic. Auk Cambridge Mass. **34** 1917 (206). **92**

Brooks, W. S. Notes on some Falkland Island birds. Cambridge Mass. Bull. Mus. Comp. Zool. **61** 1917 (135–160) 3 pls. **93**

Brown, E. J. The San Lucas Sparrow (*Passerculus rostratus guttatus*) in California. Auk Cambridge Mass. **34** 1917 (340). **94**

Bryan, W. A. Description of *Telespiza ultima* from Nihoa Island. Auk Cambridge Mass. **34** 1917 (70–72). **95**

Bryant, H. C. *vide* Swarth.

Bunyard, P. F. On the eggs and nest-down of *Somateria v.- nigra, S. spectabilis* and *Heniconetta stelleri*. London Bull. Brit. Orn. Cl. **37** 1917 (20–21). **96**

Bunyard, P. F. On the nest and eggs of *Lophodytes cucullatus*. London Bull. B.O.C. **37** 1917 (46). **97**

Bunyard, P. F. Report on the effect of the severe and prolonged winter of 1916–1917 on our resident birds. London Bull. Brit. Orn. Cl. **38** 1917 (20–24). **98**

Burg, G. *von. vide* Studer.

Burg, P. W. van der. Waarnemingen betreffende de in dit voorjaar (1917) in myn tuin gebroed hebbende vogels en hun nesten. [Beobachtungen über die im Jahre 1917 in meinem Garten gebrütet habenden Vögel und ihre Nester.] Ardea Leiden **6** 1917 (61–64). **99**

Burkitt, J. P. Note on the Long-eared Owl. Irish Nat. Dublin **26** 1917 (161–163). **100**

Burleigh, T. D. Bird life about Samar, southern Clinton Co., Pa. Cassinia Philadelphia no. **20** 1917 (18–23). **101**

Burns, F. L. Miss Lawson's recollections of ornithologists. Auk Cambridge Mass. **34** 1917 (275–282). **102**

Burtch, V. Nesting of the Florida Gallinule. Auk Cambridge Mass. **34** 1917 (319–321) 2 pls. **103**

Butler, A. G. Two rare Tanagers. The Purple-bellied Tanager (*Calliste cyanopygia*) and the Black-chinned Mountain Tanager (*Compsocoma notabilis*). Avicult. Mag. London **8** 1917 (293–296) col. pl. **104**

Butler, A. G. *vide* Meiklejohn.

Buturlin, S. A. On the birds of the Far East [Russian]. Mess. Orn. Moscou **8** 1917 (3–19, 73–88). **105**

Campbell, A. J. The Yellow-breasted Bush-Chat (*Ephthianura crocea*). Emu Melbourne **17** 1917 (61–62) col. pl. **106**

Campbell, A. J. and **Barnard,** H. G. Birds of the Rockingham Bay District, North Queensland. Emu Melbourne **17** 1917 (2–38, 106–107) 8 pls. **107**

Carroll, C. J. The severe winter of 1916–17 and its effect on birds in the south of Ireland. Brit. Bds. London **11** 1917 (26–28). **108**

Carroll, C. J. On newly discovered Irish colonies of Roseate and Sandwich Terns. Brit. Birds London **11** 1917 122–124). **109**

Carter, T. The birds of Dirk Hartog Island and Peron Peninsula, Shark Bay, Western Australia, 1916–1917, with nomenclature and remarks by Gregory M. **Mathews,** Ibis London **1917** (564–611) map 2 pls. **110**

Cary, M. Life zone investigations in Wyoming. Washington D.C. U.S. Dept. Agr. N. Amer. Fauna no. **42** 1917 (1–95) map 14 pls. 17 text-figs. **111**

Cathelin, F. Du prétendu retour au nid des oiseaux migrateurs et de l'instabilité de résidence. Rev. Franç. d'Orn. Paris **9** 1917 (169–172). **112**

Chapin, J. P. The classification of the Weaver-Birds. New York Bull. Amer. Mus. N.H. **37** 1917 (243–280) 5 pls. 9 text-figs. **113**

Chapman, A. Frederick Courtenay Selous. Brit. Birds London **10** 1917 (200–204) portr. **114**

Chapman, A. Concerning Grebes. Vasculum Hexham **2** 1917 (113–116). **115**

Chapman, A. *vide* Rintoul and Baxter.

Chapman, F. M. Notes on the plumage of North American birds. Bird-Lore Harrisburg Pa. **19** 1917 (86–87 262–263 330–331) 3 col. pls. **116**

Chapman, F. M. Daniel Giraud Elliot. Auk Cambridge Mass. **34** 1917 (1–10) portr. **117**

Chapman, F. M. The distribution of bird-life in Colombia; a contribution to a biological survey of South America. New York Bull. Amer. Mus. N.H. **36** 1917 (x + 729) 41 pls. and maps 21 text-figs. **118**

Chapman, F. M. Descriptions of new birds from Santo Domingo and remarks on others in the Brewster-Sanford collection. New York Bull. Amer. Mus. N.H. **37** 1917 (327–334) [*Oreopeleia, Microsiphonorhis, Microligea.*] **119**

Chernel v. Chernelháza, Otto Herman. Nachruf. Aquila Budapest **21** 1915. **120**

Chick, H. and **Hume,** E. M. The distribution in wheat, rice and maize grains of the substance, the deficiency of which in a diet causes polyneuritis in birds and beri-beri in man. London Proc. R. Soc. **B 90** 1917 (44–60). **121**

Chick, H. and **Hume,** E. M. The effect of exposure to temperatures at or above 100 deg. C. upon the substance (vitamine) whose deficiency in a diet causes polyneuritis in birds and beri-beri in man. London Proc. R. Soc. **B 90** 1917 (60–68). **122**

Chisholm, A. H. Queensland notes. Emu Melbourne **17** 1917 (48–51). **123**

Cholodkovsky, N. Contribution à la connaissance des cysticerques d'oiseaux. C. R. Soc. Biol. Paris **80** 1917 (219–222). **124**

Christiani, A. Om fund af Gejrfugleknogler paa Vardø (Norge). [On a find of Great Auk's bones near Vardo, Norway.] Kjöbenhavn Ornith. Tids. **11** 1917 (1–4) 1 pl. 1 text-fig. **125**

Chubb, C. *Chamaepetes fagani, Penelope brooki* and *Columba ogilviegranti* spp. n. described. London Bull. Brit. Orn. Cl. **38** 1917 (4–5). **126**

Chubb, C. *Scytalopus simonsi, Leptoptila intermedia* and *Columba anolaimae* spp. n. described, and observations on the two forms of *Gymnopelia.* London Bull. Brit. Orn. Cl. **38** 1917 (17–19). **127**

Chubb, C. New forms of *Crypturus, Rhynchotus, Nothoprocta, Nothura, Calopezus, Columba, Metriopelia, Leptoptila, Geotrygon, Pardirallus, Neocrex, Conopophaga* described. London Bull. Brit. Orn. Cl. **38** 1917 (29–34). **128**

Clarke, G. van H. Nesting in Macedonia. Ibis London **1917** (640–643). **129**

Clarke, W. E. Recovery of a Woodcock supposed to have been ringed in Ireland. Irish Nat. Dublin **26** 1917 (191). **130**

Clarke, W. E. An overlooked occurrence of the Black Lark in Great Britain. Scot. Nat. Edinburgh **1917** (49–50). **131**

Clarke, W. E. Wild life in a West Highland Deer Forest. Scot. Nat. Edinburgh **1917** (255–264, 279–288). **132**

Clay, C. I. A new record for California (*Passerculus s. savanna*). Condor Hollywood Cal. **19** 1917 (68). **133**

Coates, H. "Wanted to Complete." [Perthshire bird notes.] Perth Trans. Soc. Nat. Sci. **6** 1916 (85–102). **134**

Collett, A. K. *vide* Thomas and Collett.

Collinge, W. E. The economic status of wild birds. Journ. R. Horticult. Soc. **42** pt. i and Scot. Nat. Edinburgh **1917** (51–58). **135**

Collinge, W. E. Destructive wild Birds. Nature London **99** 1917 (6–7). **136**

Cooper, J. M. Birds of Lake Onigamis region, Que. and Algonquin Park, Ont. Ottawa Nat. **30** 1917 (123–129). **137**

Corainville, E. C. de. Observations sur quelques oiseaux de ma collection. Rev. Franç. d'Orn. Paris **9** 1917 (153–155). **138**

Cory, C. B. Notes on little known species of South American birds, with descriptions of new subspecies. Chicago Field Mus. Pub. Zool. Ser. **12** 1917 (3–7). **139**

Coursimault, E. Faune des oiseaux chanteurs des environs de Vendome. Rev. Franç. d'Orn. **9** 1917 (42–45 75–76 101–103). **140**

Coward, T. A. Notes on the Vertebrate Fauna of Cheshire and South Lancashire. Lancs. Nat. Darwen **9** 1917 (185–192 203–210 245–252 275–279). **141**

Coward, T. A. *vide* Standen.

Crandall, L. S. Breeding Birds. Results during 1916 in the Park. New York Zool. Soc. Bull. **20** 1917 (1442–1443). **142**

Crandall, L. S. Our Emu family. New York Zool. Soc. Bull. **20** 1917 (1521–1525). **143**

Criddle, N. The Red-tailed Hawk in Manitoba. Ottawa Nat. **31** 1917 (74–76). **144**

Criddle, S. and **Criddle,** N. Horned Larks at Awene, Manitoba. Ottawa Nat. **30** 1917 (144–148). **145**

Curtis, W. P. Phenological report on first appearances of birds etc. etc. in Dorset during 1915. Dorchester Proc. Dorset Nat. Hist. F. Cl. **37** 1916 (137–193) 4 photos. **146**

Dabbene, R. Especies y subespecies aparamente nuevas de *Geositta* y *Cinclodes* de la Republica Argentina y del Sur de Chile. Physis Buenos Aires **3** 1917 (52–59). **147**

Dabbene, R. Los vencejos [Cypselidae] de la Republica Argentina. El Hornero Buenos Aires **1** 1917 (3–8) 4 text-figs. **148**

Dabbene, R. Notas sobre una coleccion de aves de la isla de Martin Garcia. El Hornero Buenos Aires **1** 1917 (29–34) map. **149**

Dabbene, R. *Cypseloides senex* (Temminck) y *Clibanornis dendrocolaptoides* (Pelzeln) en Misiones (R.A.). El Hornero Buenos Aires **1** 1917 (37). **150**

Dahl, F. Die Benennung der Tiere. Zool. Anz. Leipzig **49** 1917 (205–213). **151**

Danchakoff, V. The position of the respiratory vascular net in the allantois of the chick. Amer. J. Anat. Philadelphia **21** 1917 (407–418) 1 pl. **152**

Dawson, C. B. Some Colony Birds. Part iii. Timehri Georgetown **4** 1917 (38–57). **153**

Deschiens, R. Contribution a l'étude des déplacements locaux des oiseaux cotiers. Rev. Franç. d'Orn. **9** 1917 (97–99 117–120 142–145). **154**

Despott, G. Notes on the ornithology of Malta. Ibis London **1917** (281–349 466–526). **155**

Despott, G. *Anser albifrons* [in Malta]. Malta Arch. Melitense **2** 1916 (204). **156**

Despott, G. Ornithological notes from the Maltese Islands (July–December, 1916). Malta. Arch. Melitense **1917** (251–256). **157**

Dice, L. R. Habits of the Magpie in southeastern Washington. Condor Hollywood Cal. **19** 1917 (121–124) 2 photos. **158**

Dixon, J. The home life of the Baird Sandpiper. Condor Hollywood Cal. **19** 1917 (77–84) map 5 photos. **159**

Dobbrick, L. Studien an Horsten der Wiesenweihe. J. Ornith. Leipzig **65** Bd. ii 1917 (16–27). **160**

Dobbrick, L. Beitrag zur Ornis Russisch-Litauens. Orn. Monatsb. Berlin **25** 1917 (17–20 33–37). **161**

Dobbrick, L 1st *Urinator immer* Brünn in Westpreussen vorgekommen. Orn. Monatsber. Berlin **25** 1917 (101–103). **162**

Doello-Jurado, M. Sobre aves de Puerto Deseado. El Hornero, Buenos Aires **1** 1917 (8–16) 3 photos. **163**

Domaniewski, J. von. *Sitta europaea homeyeri* Hart. und verwandte Formen. München Verhandl. Orn. Ges. **13** 1917 (174–180). **164**

Domaniewski, J. von. Nomenklatorische Bemerkung zur Gattung *Buteo* Lacep. Orn. Monatsber. Berlin **25** 1917 (129–130). **165**

Domaniewski, J. Contribution à la distribution géographique du genre *Sitta* L. [Polish]. Varsovie (Warsaw) C. R. Soc. Sci. **1913** (1037–1044). **166**

Domaniewski, J. Matériaux à la faune ornithologique de Pologne. Varsovie (Warsaw) C. R. Soc. Sci. **1915** (663–678). **167**

Domaniewski, J. Faune Passeriformes Okolie Saratova. Passeriformes der Umgegend von Saratov. Varsava Trav. Soc. Sci. **111** no. 18 1916. **168**

D'Ombrain, E. A. The Great Black Palm Cockatoo (*Microglossus aterrimus*) in captivity. Austr. Zool. Sydney **1** 1917 (95–97) fig. **169**

Donald, C. H. The Raptores of the Punjab. Bombay J. Nat. Hist. Soc. **25** 1917 (231–248) 2 pls. **170**

Douglas, S. R. An experimental investigation of the migration of Woodcock breeding in the west of Ireland. London Proc. Zool. Soc. **1917** (159–165). **171**

Dove, H. S. Bird notes from Tasmania. Emu Melbourne **17** 1917 (45–47). **172**

Dunlop, E. B. Polygamy among Rooks. Brit. Birds London **10** 1917 (278–279). **173**

Dwight, J. The status of *Larus thayeri*, Thayer's Gull. Auk Cambridge Mass. **34** 1917 (413–414) 1 pl. **174**

Ekama, H. Het verblyf van enkele trekvogels in Nederland in 1916. [Das Verbleiben einiger Zugvögel in den Niederlanden im Jahre 1916.] Ardea Leiden **6** 1917 (1–13). **175**

Erdmann, R. Cytological observations on the behaviour of chicken bone marrow in plasma medium. Amer. J. Anat. Philadelphia **22** 1917 (73–125) 9 pls. 2 text-figs. **176**

Etheridge, R., *jun.* Obituary—Edward Pierson Ramsay, LL.D., Curator, 22 Sept. 1874 to 31 Dec. 1894. Sydney Rec. Austr. Mus. **11** 1917 (205–217) portr. **177**

Evans, A. H. With the British Association in Australia. Ibis London **1917** (43–68). **178**

Evans, E. *vide* Rintoul and Baxter.

Evermann, B. W. A day with the birds of a Hoosier swamp. Wilson Bull. Oberlin Ohio **29** 1917 (169–175). **179**

Ewart, J. C. and **Mackenzie, D.** The moulting of the King Penguin (*Aptenodytes patagonica*). Edinburgh Trans. R. S. **52** pt. i 1917 (115–132) 2 pls. **180**

Farley, J. A. Ornithology at St. Mark's [Venice]. Auk Cambridge Mass. **34** 1917 (171–181). **181**

Faxon, W. Brewster's Warbler (*Vermivora leucobranchialis*) in Lexington, Mass. Auk Cambridge Mass. **34** 1917 (481–482). **182**

Fénis, F. de. Contribution à l'étude des cris et du chant des oiseaux dans ses rapports avec la musique. Paris Bull. Inst. Gén. Psychol. **17** 1917 (87–130). **183**

Fenk, R. Ueber das Vorkommen von *Anthus spinoletta spinoletta* in Thüringen und im Harz. J. Ornith. Leipzig **65** Bd ii 1917 (28–34). **184**

Ferrar, M. L. Occurrence of the Wood-Snipe (*Gallinago nemoricola*) in Salsette. Bombay J. Nat. Hist. Soc. **25** 1917 (149–150). **185**

Finch-Davies, C. J. The Damaraland Hornbill. Ibis London **1917** (273–274). **186**

Fischer-Sigwart, H. Eine Varietät von *Lanius collurio* L. im Jura. Orn. Jahrb. Hallein **27** 1916 (49–50). **187**

FitzSimmons, F. W. Our native birds: their value to man. Cape Town S. Afr. J. Sci. **13** 1917 (366–372). **188**

Foote, J. S. A contribution to the comparative histology of the femur. Washington D.C. Smiths. Contr. Knowl. **35** no. 3 1916 (1–242, birds 59–75) 35 pls. **189**

Forrest, H. E. [Birds observed.] Shrewsbury Rec. Caradoc. F. Cl. no. **26** [1917] (15–21). **190**

Forty, C. H. Occurrence of the Pied Imperial Pigeon (*Myristicivora bicolor*) in the Gulf of Siam. Bangkok J. Nat. Hist. Soc. **2** 1917 (254–255). **191**

Foster, A. H. A list of Birds which have occurred in North Hertfordshire, with notes on each species. Watford Trans. Herts. Nat. Hist. Soc. **16** 1917 (189–220). **192**

Foster, N. H. Measurements and weights of Birds' eggs. Irish Nat. Dublin **26** 1917 (41–47). **193**

Foster, N. H. The winter of 1916–17 and its effect on bird-life in Co. Down. Irish Nat. Dublin **26** 1917 (118–120). **194**

Fowler, H. W. Some rare or unusual birds in upper Philadelphia. Cassinia Philadelphia no. **20** 1917 (7–13). **195**

Franz, V. Das Vogelleben im Aisnegebiet. Orn. Monatsb. Berlin **25** 1917 (112–119). **196**

Froggatt, W. W. The destruction of bird-life in Australia. Austr. Zool. Sydney **1** 1917 (75–79). **197**

Fulljames, H. J. and others. Breeding Song-Thrush × Blackbird hybrids. Bird Notes Ashbourne **7** 1917 (198-202). **198**

Fuye, M. de la. Essai sur la photographie des Rapaces. Rev. Franç. d'Orn. **9** 1917 (49–52 68–72) 2 figs. **199**

Gabrielson, I. N. Some notes on Connecticut birds. Auk Cambridge Mass. **34** 1917 (461–465). **200**

Gabrielson, I. N. A criticism of two recent lists of Iowa birds. Wilson Bull. Oberlin Ohio **29** 1917 (97–100). **201**

Gebhardt, E. Fichtelgebergsbeobachtungen 1914. München Verhandl. Ornith. Ges. **13** 1917 (158–170). **202**

Gengler, J. Der Formenkreis *Fringilla coelebs* L. J. Ornith. Leipzig **65** Bd ii 1917 (35–42). **203**

Gengler, J. Materialen zur bayerischen Ornithologie. VIII. Achter Beobachtungsbericht aus den Jahren 1911, 1912, 1913 und 1914. München Verhandl. Ornith. Ges. **13** 1917 (1–23). **204**

Gengler, J. Herbst- und Winterbeobachtungen in Russisch-Polen, Wolhynien und Westrussland. Orn. Jahrb. Hallein **27** 1916 (63–82). **205**

Gengler, J. Weitere Kriegsbeobachtungen aus Belgien und Frankreich. Orn. Monatsb. Berlin **25** 1917 (4–10 20–25). **206**

Geyr von Schweppenburg *vide* Schweppenburg.

Ghigi, A. Richerche sull' incrociamento del *Gallus sonnerati* con polli domestici. Bologna Mem. Acc. sc. (7) **3** 1916 (1–16) 1 Tav. **207**

Gianini, C. A. Some Alaska Peninsula bird notes. Auk Cambridge Mass. **34** 1917 (394–402). **208**

Gladstone, H. S. Handbook to Lord Lilford's Coloured Figures of the Birds of the British Islands (1–69). London (Bickers) **1917** 8vo. **209**

Gladstone, H. S. John Hunt, 1777–1842. Brit. Birds London **11** 1917 (125–137 148–155) portr. **210**

Godard, A. Les oiseaux nécessaires à l'agriculture. Rev. Sci. (rose) Paris **1917** (428–433). **211**

Golsan, L. S. and **Holt, E. G.** Further notes on Alabama birds. Auk Cambridge Mass. **34** 1917 (456–457). **212**

Goodson, A. *vide* Hartert.

Gottschalk, P. Die Naumann-Bibliothek im Naumann-Museum in Cöthen. J. Ornith. Leipzig **65** Bd ii **1917** (57–62). 213

Granger, W. *vide* Matthew.

Granvik, H. Weitere Beiträge zur Frage des Zurückbleibens der Bergfinken in Schweden während des Winters 1915–16. J. Ornith. Leipzig **65** 1917 (190–193). 214

Greaves, W. Bird notes from Hebden Bridge. Naturalist London **1917** (247–248). 215

Greschik, F. Geschmacksknospen auf der Zunge des Amazonenpapageis. Anat. Anz. Jena **50** 1917 (257–270). 216

Grinnell, J. Field tests of theories concerning distributional control. Amer. Nat. New York **51** 1917 (115–128). 217

Grinnell, J. The niche-relationships of the California Thrasher. Auk Cambridge Mass. **34** 1917 (427–433) map. 218

Grinnell, J. The subspecies of *Hesperiphona vespertina*. Condor Hollywood Cal. **19** 1917 (17–22) fig. 219

Grinnell, J. An invasion of California by the Eastern Goshawk. Condor Hollywood Cal. **19** 1917 (70–71). 220

Grinnell, J. and **Storer, T. I.** A new race of Fox-Sparrow, from the vicinity of Mond Lake, California. Condor Hollywood Cal. **19** 1917 (165–166) 1 fig. 221

Griscom, L. *vide* Nichols, Murphy and Griscom.

Gunther, R. T. Report on agricultural damage by vermin and birds in the counties of Norfolk and Oxfordshire in 1916. (1–92) Oxford (University Press) **1917** 8vo. 222

Gunther, R. T. Note on the acclimatisation of the Australian Black Swan (*Chenopsis atrata*). Ibis London **1917** (241–244) 1 text-fig. 223

Gurney, J. H. Ornithological notes from Norfolk for 1916. 23rd annual report. Brit. Birds London **10** 1917 (230–244). 224

Gyldenstolpe, N. On birds and mammals from the Malay Peninsula. Ark. Zool. Stockholm **10** no. 26 1917 (1–31). 225

Gyldenstolpe, N. Notes on the heel-pads in certain families of Birds. Ark. Zool. Stockholm **11** no. 12 1917 (1–15) 16 text-figs. 226

Haase, O. Beiträge zur Avifauna von Nowaja Semlja. Nach dem Dänischen von H. Theo. L. Schaaning. J. Ornith. Leipzig **65** Bd ii 1917 (63–72). 227

Hagen, W. Ornithologische Mitteilungen [in der Gegend von Lübeck]. J. Ornith. Leipzig **65** 1917 (181–189). 228

Hagen, W. Zur Biologie und Faunistik unserer Certhia-Arten. J. Ornith. Leipzig **65** Bd ii 1917 (73–80). 229

Hagen, W. Gibt es zwei deutsche Blässhühner? Ornith. Monatsber. Berlin. **25** 1917 (85–92). 230

Hagen, W. *vide* Laubmann.

Hahn, E. Ueber den Farbensinn der Tagvögel und die Zapfenölkugeln. Zs. wiss. Zool. Leipzig **116** 1916 (1–42) 1 Taf. 7 text-figs. 231

Hammling, J. Neuer Beitrag zur Kenntnis der Vogelwelt der Provinz Posen. J. Ornith. Leipzig **65** 1917 (397–434). 232

Hammling, J. *Coracias garrulus* bei der Nahrungsaufnahme. Orn. Monatsb. **25** 1917 (57–58). 233

Hanna, G. D. The summer birds of the St. Matthew Island [Bering sea] bird reservation. Auk Cambridge Mass. **34** 1917 (403–410). 234

Hanna, W. C. Further notes on the White-throated Swifts of Slover mountain. Condor Hollywood Cal. **19** 1917 (1–8) 4 figs. 235

Hansen, H. E. and **Squires, W. A.** A list of birds breeding in San Francisco County, California. Condor Hollywood Cal. **19** 1917 (54–62); also **Ray,** *ibid.* p. 170. 236

Harris, J. A., Blakeslee, A. F. and **Kirkpatrick, W. F.** Inter-periodic correlation in the egg production of the Domestic Fowl. Washington D.C. Proc. Nat. Acad. Sci. **3** 1917 (565–569). 237

Harris, J. A., Blakeslee, A. F. and **Warner, D. E.** Body pigmentation and egg production in the Fowl. Washington D.C. Proc. Nat. Acad. Sci. **3** 1917 (237–241). 238

Hartert, E. On the European forms of the Cormorant and Little Bustard. Brit. Birds London **10** 1917 (210–214). **239**

Hartert, E. *Synallaxis terrestris bolivari* and *Vireo josephae mirandae* subspp. n. described. London Bull. B. O. C. **37** 1917 (31–32). **240**

Hartert, E. Remarks on *Myrmecocichla* and *Phylloscopus.* London Bull. B. O. C. **37** 1917 (41–43). **241**

Hartert, E. On the so-called penis of *Textor niger.* London Bull. B. O. C. **37** 1917 (51–53). **242**

Hartert, E. *Alaemon alaudipes boavistae* subsp. n. London Bull. B. O. C. **37** 1917 (56). **243**

Hartert, E. *Sylvia deserticola maroccana, Ardea cinerea firasa, Aethopyga seheriae tonkinensis* subspp. n. described. London Bull. B. O. C. **38** 1917 (6–7). **244**

Hartert, E. Note on the taxonomy of *Parus flavipectus* and description of a new subspecies; also description of a new *Herpornis.* London Bull. Brit. Orn. Cl. **38** 1917 (19–20). **245**

Hartert, E. On a new subspecies of *Anthreptes* and notes on *Edolisoma.* London Bull. Brit. Orn. Cl. **38** (26–29). **246**

Hartert, E. On some Rallidae. i. The name of the African "Purple Coot." ii. *Porphyrio poliocephalus caspius* subsp. nov. iii. The forms of *Gallinula chloropus.* iv. The forms of *Porzana fusca* (L.). Nov. Zool. Tring **24** 1917 (265–274). **247**

Hartert. Notes on Game-birds. i. The generic name of the Red-legged Partridges. ii. The correct name of the Barbary Partridge. iii. The forms of the Greek Partridge. iv. *Ammoperdix.* v. The forms of *Perdix perdix.* vi. The correct names of the "Black-bellied Sandgrouse" and the Common Francolin. vii. The forms of *Francolinus pondicerianus.* viii. The subspecies of *Francolinus francolinus.* ix. *Francolinus bicalcaratus* and its races. x. On the synonymy of *Tetrao parvirostris.* Nov. Zool. Tring **24** 1917 (275–292). **248**

Hartert, E. Some further notes on *Anthreptes malaccensis.* Nov. Zool. Tring **24** 1917 (323). **249**

Hartert, E. On the forms of *Coturnix coturnix.* Nov. Zool. Tring **24** 1917 (420–425). **250**

Hartert, E. *Scolopax rusticola mira.* Nov. Zool. Tring **24** 1917 (437) 1 pl. **251**

Hartert, E. On the Crested Larks of the Nile valley. Nov. Zool. **24** 1917 (439–441). **252**

Hartert, E. Notes on Pheasants. Nov. Zool. Tring **24** 1917 (442–452). **253**

Hartert, E. A few notes on the Birds of Yemen. Nov. Zool. Tring **24** 1917 (454–462). **254**

Hartert, E. The subspecies of *Cyanopica cyanus.* Nov. Zool. Tring **24** 1917 (493). **255**

Hartert, E. and **Goodson,** A. Notes and descriptions of South American Birds. Nov. Zool. Tring **24** 1917 (410–419). **256**

Hartert, E. and **Goodson,** A. Further notes on South American birds. Nov. Zool. Tring **24** 1917 (494–501). **257**

Hartert, E. *vide* Rothschild.

Hartert, E. *vide* Sclater.

Hartley, G. I. *vide* Beebe.

Haviland, M. D. Notes on the breeding-habits of the Dotterel on the Yenesei. Brit. Bds. London **11** 1917 (6–11) 2 photos. **258**

Haviland, M. D. *vide* Meiklejohn.

Hegyfoky, J. Vogelzug und Wetter im Frühling des Jahres 1915 u. 1916. Aquila Budapest **23** 1917 (50–55 Magyar, 445–448 German). **259**

Heinroth, O. Joh. Friedr. Naumann im Lichte der heutigen Forschung. J. Ornith. Leipzig **65** 1917 (116–120). **260**

Heinroth, O. Beziehungen von Jahreszeit, Alter und Geschlecht zum Federwechsel. J. Ornith. Leipzig **65** Bd ii 1917 (81–95). **261**

Helper, H. Vogelbeobachtungen im Frühling. Zool. Anz. Leipzig **49** 1917 (214–220). **262**

Hellmayr, C. E. Beschreibung von sechs neuen neotropischen Vogelformen, nebst einer Bemerkung über *Ampelion cinctus* (Tsch.). München Verhandl. Orn. Ges. **13** 1917 (106–119). **263**

Hellmayr, C. E. Zur Nomenklatur zweier paläarctischer Krähen. München Verhandl. Orn. Ges. **13** 1917 (181–187). **264**

Hellmayr, C. E. Miscellanea Ornithologica. ii. Zwei neue neotropische Tracheophonen. München Verhandl. Orn. Ges. **13** 1917 (188–200). **265**

Helms, O. og **Schiøler,** E. L. Om nogle for Grønlands Øst- og Westkyst nye og sjaeldne Arter. [New or rare birds from the east and west coasts of Greenland.] Kjöbenhavn Orn. Tids. **11** 1917 (172–175). **266**

Hennemann, W. Zum Vorkommen der Nachtigall im Sauerlande. Münster Jahresber. Westfal. Prov.-Ver. Wiss. **44** 1915–16 (169–173). **267**

Hennemann, W. Ornithologische Beobachtungen im Sauerlande in den Jahren 1912 und 1913. Orn. Jahrb. Hellein **27** 1916 (95–133). **268**

Hennemann, W. Zum Vorkommen des Girlitz im Sauerlande. Orn. Monatsb. Berlin **25** 1917 (38–42). **269**

Hennemann, W. Zur Lebensweise der Wasseramsel *Cinclus aquaticus* Bchst. Orn. Monatsber. Berlin **25** 1917 (78–80). **270**

Hennicke, C. R. Etwas über die hygienische und wirtschaftliche Bedeutung der Vögel. J. Ornith. Leipzig **65** Bd ii 1917 (96–111). **271**

Henninger, W. F. The diary of a New England Ornithologist [Erwin I. Shores]. An appreciation. Wilson Bull. Oberlin Ohio **29** 1917 (1–17). **272**

Henninger, W. F. More records from the "Shores" collection. Wilson Bull. Oberlin Ohio **29** 1917 (95–96). **273**

Hersey, F. S. The present abundance of birds in the vicinity of Fort St. Michael, Alaska. Auk Cambridge Mass. **34** 1917 (147–159). **274**

Hersey, F. S. The status of the Black-throated Loon (*Gavia arctica*) as a North American bird. Auk Cambridge Mass. **34** 1917 (283–290). **275**

Hess, A. Erbeutung einer Asiatischen Kragentrappe (*Otis macqueeni*) in der Schweiz. Orn. Monatsb. Berlin **25** 1917 (58–59). **276**

Hess, A. Das Blasshuhn (*Fulica atra*) als Ringvogel. Orn. Monatsb. Berlin **25** 1917 (111–112). **277**

Hesse, E. Vom Jagdfalk und Alpen-Lämmergeier im Zoolog. Museum der Universität Leipzig. J. Ornith. Leipzig **65** Bd ii 1917 (112–115). **278**

Hesse, E. Feldlerche ein Nestjunges forttragend. Orn. Monatsber. Berlin **25** 1917 (143–144). **279**

Heurn, W. C. van. Uit het vogelleven van „Nederland tusschen de tropen." [Aus dem Vogelleben von „den Niederlanden zwischen den Tropen."] Daventer Club Jaarber. Nederl. Vogelk. J. B. **7** 1917 (25–40). **280**

Heyder, R. Einige Gelegenheitsbeobachtungen an der Vogelwelt der weiteren Umgegend von Verdun (Frankreich). Orn. Monatsb. Berlin **25** 1917 (121–128). **281**

Hildebrandt, H. Das Vorkommen einiger Vögel im Beobachtungsgebiet C. L. Brehms einst und jetzt. J. Ornith. Leipzig **65** Bd ii 1917 (116–124). **282**

Hildebrandt, H. Ist das Vorkommen von *Glaucidium passerinum* L. und *Syrnium uralense* Pall. im Osterlande erwiesen? Ornith. Monatsb. Berlin **25** 1917 (25–28). **283**

Hoffmann, B. Die verschiedenen Methoden der Darstellung von Vogelstimmen. J. Ornith. Leipzig **65** 1917 (66–86). **284**

Hoffmann, B. Der Gesang und Andres von unserem Mauersegler (*Cypselus apus* L.). J. Ornith. Leipzig **65** 1917 (459–464). **285**

Hoffmann, B. Ornithologisches aus Pfronten. München Verhandl. Ornith. Ges. **13** 1917 (61–73). **286**

Hoffmann, B. Weissflügelige Seeschwalben (*Hydrochelidon leucoptera* [Schinz]) am Dippelsdorper Teich in Sachsen. Orn. Monatsber. Berlin **25** 1917 (147–148). **287**

Hollaender, P. P. Ueber den Ursprung der aus dem Mittelhirn im dorsalen Längsbündel absteigenden Nervenfasern bei Sauropsiden. Jenische Zs. Natw. **55** 1917 (203–220) 11 figs. **288**

Hollister, N. The Black Vulture in the District of Columbia and Maryland. Washington D.C. Proc. Biol. Soc. **30** 1917 (123). **289**

Holt, E. G. *vide* Golsan and Holt.

Hopkinson, E. Reference list of coloured plates of the Parrots. Avicult. Mag. London **8** 1917 (85–89 117–127 151–156 176–177). **290**

Hopkinson, E. Cuckoos in captivity. Avicult. Mag. London **9** 1917 (31–40). **291**

Hopkinson, E. Whydahs. Bird Notes Ashbourne **8** 1917 (183–186 210–214 237–247 259–264). **292**

Hopwood, J. C. and **Mackenzie,** J. M. D. A list of birds from the North Chin Hills. Bombay J. Nat. Hist. Soc. **25** 1917 (72–91). **293**

Hørring, R. Fuglene ved de danske Fyr i 1915. 33te Aarsberetning om danske Fugle. [The birds at the Danish lighthouses in the year 1915. 33rd annual report.] København Nath. Medd. **68** 1917 (211–297). **294**

Howe, F. E. The Acanthizae or Tit-Warblers. Emu Melbourne **16** 1917 (170–180) 2 pls. 1 text-fig. **295**

Howe, F. E. Description of the nest and eggs of *Melithreptus atricapillus mallee* Mathews. Emu Melbourne **16** 1917 (238). **296**

Howe, F. E. Observations on the genus *Hylacola* (Ground-Wrens). Emu Melbourne **17** 1917 (87–94 113) 1 pl. **297**

Howell, A. B. A new subspecies of Red-winged Blackbird from western Central America. Auk Cambridge Mass. **34** 1917 (196–197). **298**

Howell, A. B. Birds of the islands off the coast of southern California. Hollywood Cal. Cooper Orn. Cl. Pacific coast Avif. no. **12** 1917 (1–127) map. **299**

Hughes, F. I. Note on the Great Brown Vulture (*Vultur monachus*) in captivity. Bombay J. Nat. Hist. Soc. **25** 1917 (298–300) 3 photos. **300**

Hume, E. M. *vide* Chick.

Ibath, A. Das staatliche Vogelschutzgebiet an der alten Weichselmündung bei Neufähr unweit Danzig. Beitr. Naturdenkmalpflege **5** 1916. **301**

Ibarth. Ueber den Karmingimpel. Orn. Monatsb. Berlin **25** 1917 (128–129). **302**

Ingram, *Sir* W. The Great Bird-of-Paradise on the island of Little Tobago (*Paradisea apoda*). Avicult. Mag. London **8** 1917 (341–351). **303**

Iredale, T. *vide* Mathews.

Jackson, A. C. The moult and sequence of plumages of the British Waders. Brit. Birds London **11** 1917 (55–64 83–85 105–116). **304**

Jacobi, A. Artberechtigung, Winterkleid und Melanismus von *Uria mandtii* Licht. J. Ornith. Leipzig **65** Bd ii 1917 (125–128). **305**

Jacobi, A. Die Enstehung von H. G. L. Reichenbachs "vollständigster Naturgeschichte der Vögel." Orn. Monatsber. Berlin **25** 1917 (97–101). **306**

Johnston, S. J. On the Trematodes of Australian birds. Sydney N.S.W. J. R. Soc. **50** 1917 (187–260) 10 pls. **307**

Jordans, A. von. Die Vogelfauna Mallorcas mit Berücksichtigung Menorcas und der Pityusen. Ein Beitrag zur Zoogeographie des Mediterrangebietes. Falco Halle **10** 1914. **308**

Jourdain, F. C. R. On the eggs of *Porzana cinerea brevipes, Uria troille troille* and *U. t. californica.* London Bull. B. O. C. **37** 1917 (19–20). **309**

Jourdain, F. C. R. On the eggs of some Japanese Cuckoos. London Bull. B. O. C. **37** 1917 (45). **310**

Jourdain, F. C. R. *vide* Baker.

Jourdain, F. C. R. *vide* Meiklejohn.

Jourdain, F. C. R. *vide* Owen.

Jungersen, H. F. E. Two cases of pseudohermaphroditism in male Pigeons (*Columba domestica*). København Nath. Medd. **68** 1917 (7–22) with 2 figs. **311**

Karamsin, A. N. Birds observed in the Aktubinsk-circle of the Turgai-Region. [Russian] Mess. Orn. Moscou **8** 1917 (117–124). **312**

Kayser, C. Ueber das frühere Horsten des Steinadlers im Riesengebirge. Ornith. Monatsb. Berlin **25** 1917 (137–141). **313**

Kayser, C. Einige Notizen zur Ornis Schlesiens. Orn. Monatsber. Berlin **25** 1917 (163–164). **314**

Kayser, C. Ornithologische Beobachtungen aus der Umgegend von Lissa i.P. Posen Zs. D. Ges. Wiss. **21** 1914. **315**

Kayser, C. Ornithologische Beobachtungen aus der Umgebung von Lissa i.P., insbesondere seit dem Herbst 1915. Posen Zs. D. Ges. Wiss. **23** 1917 (2-19). **316**

Keene, A. E. *vide* Ramsay.

Kennedy, C. H. Some factors involved in the nesting habit of birds. Condor Hollywood Cal. **19** 1917 (87–93) 6 figs. **317**

Kennedy, J. N. Notes on birds observed in the North Sea and North Atlantic Ocean during the autumn and winter of 1914. Ibis London **1917** (30–41). **318**

Kennedy, J. N. A little-known bird-colony in the Gulf of Mexico. Ibis London **1917** (41–43). **319**

Kennedy, J. N. Birds in the Ancre valley during the winter of 1916–1917. Ibis London **1917** (526–538) map. **320**

Kershaw, J. A. New and rare Victorian birds from Mallacoota. Emu Melbourne **17** 1917 (107–108). **321**

Killermann, S. Die ausgestorbenen Maskarenenvögel. Natw. Wochenschr. Jena **14** 1915 (353). **322**

King, J. Bird Life in the midlands of Natal. Cape Town S. Afr. J. Sci. **13** 1917 (362–365). **323**

Kirkpatrick, W. F. *vide* Harris.

Klein, —. Fortpflanzung von *Gypaëtus barbatus* im Kön. Zool. Garten in Sophia. Ornith. Monatsb. Berlin **25** 1917 (12–13). **324**

Kleinschmidt, O. Die Verwandtschaft von *Emberiza citrinella* und *Emberiza leucocephala.* J. Ornith. Leipzig **65** 1917 (93–95). **325**

Kloss, C. B. On two new races of *Palaeornis eupatria* (Linn.). Bangkok J. Nat. Hist. Soc. **2** 1917 (218–220). **326**

Knopfli, W. Mutmassliche Ausbildung und Geschichte der Vogelgesellschaften des schweizerischen Mittellandes. Orn. Jahrb. Hallein **27** 1916 (1–26). **327**

Knopfli, W. Beiträge zur Morphologie und Entwicklungsgeschichte des Brustschulterskelettes der Vögel. Zürich Vierteljahrsch. Natf. Ges. **62** 1917 (49–58). **328**

Koch, R. Die Vögel der Umgegend von Anholt und des Niederrheins, nach den Aufzeichnungen und Sammlungen des verstorbenen Fürsten Leopold zu Salm-Salm, Anholt Jahresber. Westfal. Prov. Ver. **44** 1915–16 (132–153). **329**

Koenig, A. Die Eulen Aegyptens. J. Ornith. Leipzig **65** Bd ii 1917 (129–160). **330**

Kollibay. Ueber Missbildungen und Farbenabänderungen in der Reichsgräflich Schaffgottschen Sammlung in Warmbrunn. J. Ornith. Leipzig **65** 1917 (105–107). **331**

Kollibay, P. Bemerkungen über einige turkestanische Vögel. J. Ornith. Leipzig **65** 1917 (444–458). **332**

Konradsen, O. G. Danmark som yngleplads for skovsneppen (*Scolopax rusticula*). [Woodcock breeding in Denmark.] Kjöbenhavn Ornith. Tids. **11** 1917 (38–43). **333**

Koske, F. Die Veröffentlichungen über die Vögelwelt Pommerns. (Ornithologische Bibliographie Pommerns bis zum Ende des Jahres 1915). J. Ornith. Leipzig **65** 1917 (1–42 121–169). **334**

Koske, F. Der Karmingimpel in Pommern. Orn. Monatsb. Berlin **25** 1917 (110–111). **335**

Koudashev, *Prince* **A.** Preliminary list of birds observed in the Sochi district of the Black-Sea Government. [Russian]. Mess. Ornith. Moscou **8** 1917 (20–36 89–97 English summary 96–97). **336**

Krüss, P. Der Vogelzug auf Helgoland in den Jahren 1912 und 1913. Nach den Tagebüchern der Vogelwarte der kgl. biologischen Anstalt auf Helgoland zusammengestellt. J. Ornith. Leipzig **65** 1917 Sonderhft. (1–120). **337**

Krüss, P. Einige auf Helgoland erlegte seltnere Vogelarten. Orn. Monatsb. Berlin **25** 1917 (141–142). **338**

Kuroda, N. A collection of Birds from Tonkin. Tokyo Annot. Zool. Japon. **9** 1917 (217–254) **339**

Kuroda, N. Notes on Formosan Birds, with description of a new Bullfinch. Tokyo Annot. Zool. Jap. **9** 1917 (255–297). **340**

Kuroda, N. On one new genus and three new species of birds from Corea and Tsushima. Tori [Bird] Tokyo No. **5** 1917 Supplement (1-6) 1 pl. 2 text-fig. **341**

La Touche, J. D. D. Further notes on the birds of the Province of Fohkien in south-east China. Ibis London **1917** (557-564). **342**

Lakjer, T. Bjergvipstjert (*Motacilla melanope*) ynglende i Sverige. [*M. melanope* breeding in Sweden.] Kjöbenhavn Ornith. Tids. **11** 1917 (97–100). **343**

Laubmann, A. Beiträge zur Avifauna des Elbsees bei Aitrang im Algäu. München Verhandl. Ornith. Ges. **13** 1917 (24–49). **344**

Laubmann, A. Ein neuer Name für *Alcedo grandis* Blyth. München Verhandl. Ornith. Ges. **13** 1917 (105). **345**

Laubmann, A. Eine neue Rabenkrähe aus Japan. München Verhandl. Orn. Ges. **13** 1917 (201–202). **346**

Laubmann, A. Bemerkungen zu *Fulica stenoleuca* Peckelhoff. Orn. Monatsb. Berlin **25** 1917 (130–133); also **Hagen** *ibid.* (144–145). **347**

Le Souef, W. H. D. Australian Ibises. Emu Melbourne **17** 1917 (94–95) 2 pls. **348**

Legge, W. V. A new Raptor (*Gypoictinia melanosterna*) for Tasmania. Emu Melbourne **17** 1917 (103–105). **349**

Leigh, H. S. *vide* Theobald.

Lincoln, F. C. A review of the genus *Pediœcetes* in Colorado. Washington D.C. Proc. Biol. Soc. **30** 1917 (83–86) 1 pl. **350**

Lincoln, F. C. The birds of Rock Canyon, Arizona. Wilson Bull. Oberlin Ohio **29** 1917 (63–73) 6 photos. **351**

Lindner, C. Zusammenfassung der Ergebnisse in Bezug auf die Erforschung des deutschen Steinsperlings (*Passer petronius*) im letzten Jahrzehnt (1906–1916). J. Ornith. Leipzig **65** Bd ii 1917 (161–165). **352**

Littlejohns, R. T. Observations from the Fern-tree Gully district (Vic.). Emu Melbourne **16** 1917 (236–238). **353**

Lloyd, H. Ontario bird-notes. Auk Cambridge Mass. **34** 1917 (457–460). **354**

Lönnberg, E. Birds collected in eastern Congo by Captain Elias Arrhenius. Stockholm Ark. Zool. **10** no. 24 1917 (1–32). **355**

Lönnberg, E. Notes on some interesting East African Birds. Stockholm Ark. Zool. **11** no. 5 1917 (1–5). **356**

Loveridge, A. A natural history expedition through the Kedong valley, B.E.A. J. E. Afr. and Uganda N. H. Soc. **6** 1917 (157–167). **357**

Loveridge, A. Natural history notes from British East Africa. J. E. Afr. and Uganda N. H. Soc. **6** 1917 (170–185). **358**

Lowe, J. R. B. Notes on *Ashbyia lovensis*. Notes on *Amytornis merrotsii*. Adelaide S. Austr. Orn. **3** 1917 (40–42). **359**

Lowe, W. P. Remarks on Colorado birds. Auk Cambridge Mass. **34** 1917 (453–455). **360**

Lucanus, F. *von*. Das numerische Verhältnis der Geschlechter in der Vogelwelt. J. Ornith. Leipzig **65** Bd ii 1917 (166–175). **361**

Lucanus. [On *Turdus iliacus coburni*.] J. Ornith. Leipzig **67** 1917 (228–229). **362**

Lucanus, F. *von*. Ueber die geographischen Formen von *Turdus viscivorus* L. J. Ornith. Leipzig **65** 1917 (506–512). **363**

Lucanus, F. *von*. Ornithologische Station des "Lotos" in Liboch a. Elbe. Orn. Monatsb. Berlin **25** 1917 (176–177). **364**

Ludlow, F. Notes on the bird-life of Ahwaz, Persia. Bombay J. Nat. Hist. Soc. **25** 1917 (303–306). **365**

McAtee, W. L. Life and writings of Professor F. E. L. Beal. Auk Cambridge Mass. **34** 1917 (243–264) portr. **366**

McAtee, W. L. The shedding of the stomach lining by birds, particularly as exemplified by the Anatidae. Auk Cambridge Mass. **34** 1917 (415–421) 2 pls. **367**

McAtee, W. L. Propagation of Wild-Duck Foods. Washington D.C. U. S. Dept. Agric. Bull. no. **465** 1917 (1–40) 35 figs. **368**

McAtee, W. L. Some local names of birds. Wilson Bull. Oberlin Ohio **29** 1917 (74–95). **369**

McAtee, W. L., Preble, E. A. and Wetmore, A. Winter birds about Washington, D.C., 1916–1917. Wilson Bull. Oberlin Ohio **29** 1917 (183–187). **370**

Macgillivray, W. Ornithologists in North Queensland. Emu Melbourne **17** 1917 (63–87). **371**

McGowan, W. *vide* Theobald.

McGregor, P. J. C. Notes on birds observed at Erzerum. Ibis London **1917** (1–30). **372**

Mackenzie, D. Spoonbill in the Outer Hebrides. Scot. Nat. Edinburgh **1917** (293). **373**

Mackenzie, D. *vide* Ewart.

Mackenzie, J. M. D. *vide* Hopwood.

Mackworth-Praed, C. W. A collection of birds from two districts of British East Africa. Ibis London **1917** (362–421) map. **374**

Mackworth-Praed, C. W. *vide* Sclater.

M'Lennan, W. *vide* White, H. L.

Macnamara, C. The Purple Martin. Ottawa Nat. **31** 1917 (49–54). **375**

Macoun, J. et Macoun, J. M. Catalogue des Oiseaux du Canada (xii + 909 + xv). Ottawa (Imp. du Gouv.) **1916** 8vo. **376**

MacReynolds, G. A Pennsylvania Starling roost. Auk Cambridge Mass. **34** 1917 (338–340). **377**

Martorelli, G. Di un nuovo caso di asimmetria del becco nella *Sitta cinnamomeiventris*. Milano Rend. Ist. lomb. **49** 1916 (892–896) 5 text figs. **378**

Masefield, J. R. B. Report of Sections—Aves. Stafford Trans. N. Staff. Field Cl. **51** 1917 (100–104). **379**

Matthew, W. D. and Granger, W. The skeleton of *Diatryma*, a gigantic bird from the lower Eocene of Wyoming. New York Bull. Amer. Mus. N.H. **37** 1917 (307–326) 13 pls.; also Amer. Mus. Journ. **17** 1917 (417–418) 2 figs. **380**

Mathews, G. M. The Birds of Australia **6** pts. 2–6 (105–516) pls. 283–324. London (Witherby) 1917 4to.

Mathews, G. M. Birds of the north and north-west of Australia. Adelaide S. Austr. Orn. **3** 1917 (12–17 34–38 68–75 109–113). **382**

Mathews, G. M. New subspecies and notes on species. Austr. Av. Rec. London **3** 1917 (71–78). **383**

Mathews, G. M. The re-discovery of two lost birds. Austr. Av. Rec. London **3** 1917 (79–90) 1 pl. **384**

Mathews, G. M. Notes on some extra-limital Parrot names. Austr. Av. Rec. London **3** 1917 (91–94). **385**

Mathews, G. M. On a collection of birds from the Macleay Museum, Sydney, N.S.W. Austr. Av. Rec. London **3** 1917 (95–97). **386**

Mathews, G. M. Silvester Diggles, Ornithologist. Austr. Av. Rec. London **3** 1917 (98–108). **387**

Mathews, G. M. Additions and corrections to my list. Austr. Av. Rec. London **3** 1917 (127–128). **388**

Mathews, G. M. Some new Australian birds. Emu Melbourne **16** 1917 (180–185). **389**

Mathews, G. M. and Iredale, T. Avian nomenclatorial notes. Austr. Av. Rec. London **3** 1917 (113–126). **390**

Mathews, G. M. *vide* Carter.

Meares, C. S. Field-notes on the nesting of the Dotterel in Scotland. Brit. Birds London **11** 1917 (12–14). **391**

Meares, C. S. Field-notes on the nesting of the Hobby. Brit. Birds London **11** 1917 (50–54). **392**

Meiklejohn, R. F. Some reflections on the breeding-habits of the Cuckoo (*Cuculus canorus*). Ibis London **1917** (186–223); also **Haviland, Butler, Nicholl** (456–462), **Jourdain** (633–636). **393**

Menegaux, A. Etude d'une collection d'oiseaux du Matto Grosso. Rev. Franç. d'Orn. Paris **9** 1917 (24–26 37–40 55–58 84–88). **394**

M[enegaux], A. Reprise d'un Albatros bagué. Rev. Franç. Orn. **9** 1917 (64). **395**

Menegaux, A. Rubiette Titys et Rubiette de Caire. Rev. Franç. d'Orn. **9** 1917 (91–92). **396**

Merikallio, E. Om. de i hule træer rugende aenders økologi. [On ducks which breed in hollow trees.] Kjöbenhavn Ornith. Tids. **11** 1917 (85–96) 3 figs. **397**

Merriam, H. F. Nesting of the Cape May Warbler at Lake Edward, Quebec. Auk Cambridge Mass. **34** 1917 (410–413). **398**

Meyere, J. L. F. de. Ringmusschen (*Passer montana* [L]) onder dakpannen. [Feldsperlinge unter Dachziegeln.] Ardea Leiden **6** 1917 (107–109). **399**

Michel, J. Ornithologische Reiseskizzen. Orn. Jahrb. Hallein **28** 1917 (1–18). **400**

Milburn, C. E. Ornithological notes from Middlesbrough, chiefly relating to 1916. Vasculum Hexham **3** 1917 (57–59). **401**

Millais, J. G. *vide* Rintoul and Baxter.

Miller, L. E. A search for *Scytalopus*. New York Amer. Mus. Journ. **17** 1917 (157–167) photos. **402**

Miller, W. de W. *vide* Oberholser.

Millet-Horsin. Le commerce des oiseaux à Dakar. Rev. Franç. d'Orn. Paris **9** 1917 (21–24 33–37). **403**

Millet-Horsin, Notes ornithologiques d'A[frique] O[rientale] F[rançaise]. Rev. Franç. d'Orn. Paris **9** 1917 (104–107). **404**

Millet-Horsin *vide* Bouet.

Mintus, A. Die aus Nieder-Oesterreich als Horstvögel verschwundenen Raubvögelarten. Orn. Jahrb. Hallein **27** 1916 (33–44). **405**

Moffat, C. B. An exterminating winter: its effects on bird-life in Co. Wexford. Irish Nat. Dublin **26** 1917 (89–98). **406**

Moffat, C. B. Some migrant notes. Irish Nat. Dublin **26** 1917 (131–133). **407**

Morgan, A. M. Notes on the food and temperatures of Cormorants. Adelaide S. Austr. Orn. **3** 1917 (75–78). **408**

Morgan, A. M. Birds on the river Murray. Adelaide S. Austr. Orn. **3** 1917 (99–109). **409**

Mousley, H. The breeding of the Black-throated Blue Warbler at Hatley, Stanstead County, Quebec, 1916. Auk Cambridge Mass. **34** 1917 (187–191). **410**

Mousley, H. A study of subsequent nestings after the loss of the first. Auk Cambridge Mass. **34** 1917 (381–393) 2 pls. **411**

Mousley, H. Sap-drinking habits of Warblers. Auk Cambridge Mass. **34** 1917 (484–485). **412**

Mullens, W. H. and Swann, H. K. A bibliography of British Ornithology from the earliest times to the end of 1912, including biographical accounts of the principal writers and bibliographies of their published works. (In six parts), Pts. v–vi (497–691). London (Macmillan) 1917 8vo. **413**

Murphy, R. C. Natural history observations from the Mexican portion of the Colorado desert. New York Abs. Proc. Linn. Soc. nos. **24-25** 1917 (43–101) map 5 pls. **414**

Murphy, R. C. A new Albatross from the west coast of South America. New York Bull. Amer. Mus. N.H. **37** 1917 (861–864) 1 text-fig. **415**

Murphy, R. C. *vide* Nichols, Murphy and Griscom.

Myers, J. A. Studies on the syrinx of *Gallus domesticus*. J. Morph. Philadelphia **29** 1917 (165–201) 7 pls. **416**

Natorp, O. Beobachtungen am Brutplatz des Halsbandfliegenfängers (*Muscicapa collaris* Bechst.) in Schlesien. J. Ornith. Leipzig **65** Bd. ii 1917 (176–188). **417**

Neumann, O. Ueber die Avifauna des unteren Senegal-Gebiets. J. Ornith. Leipzig **65** Bd. ii 1917 (189–214). **418**

Neumann, O. Neue Formen aus dem papuanischen Gebiet. Orn. Monatsb. Berlin **25** 1917 (153–156). **419**

Neuville, H. *vide* Retterer.

Newton, E. T. Notes on bones found in the Creag nan Uamh Cave, Inchnadamff, Assynt, Sutherland. Edinburgh Proc. R. Soc. **37** 1917 (344–348). **420**

Nibe, T. Kakko no hanshoku to oyoshikiri to no kwankei. [Relation of *Acrocephalus orientalis* to the breeding of the cuckoo.] Tori [Bird] Tokyo No. **5** 1917 (62–72). **421**

Nicholl, A. M. C. *vide* Meiklejohn.

Nichols, J. B. Rare birds in Sussex. Brit. Birds London **11** 1917 (45). **422**

Nichols, J. B. and Parkin, T. Three birds new to the British List. Brit. Birds London **10** 1917 (254–262) 3 figs. **423**

Nichols, J. T., Murphy, R. C. and Griscom, L. Notes on Long Island birds. Auk Cambridge Mass. **34** 1917 (434–444). **424**

Nichols, W. B. A catalogue of the birds of the Stour estuary. Pt. 1. Ipswich Proc. Suff. Inst. **16** 1917 (167–178). **425**

Nicoll, M. J. *Sylvia norrisae* sp. n. and *Prinia gracilis natronensis* subsp. n. described. London Bull. B. O. C. **37** 1917 (28–30). **426**

Noble, H. Supposed breeding of the Barnacle Goose in Iceland. Brit. Bds. London **10** 1917 (181–184). **427**

Noggler, J. Beobachtungen über den Vogelzug in Mariahof, 1915. Orn. Jahrb. Hallein, **28** 1917 (51–52). **428**

Norton, A. H. Type of the Large-billed Puffin. Auk Cambridge Mass. **34** 1917 (205–206). **429**

Oberholser, H. C. Critical notes on the eastern subspecies of *Sitta carolinensis* Latham. Auk Cambridge Mass. **34** 1917 (181–187). **430**

Oberholser, H. C. Notes on North American birds. Auk Cambridge Mass. **34** 1917 (191–196 321–329 465–470). [*Cepphus, Dendrocygna, Anas, Lophortyx, Myiarchus, Planesticus, Vireo, Baeolophus, Geothlypis, Dendroica, Vermirora, Molothrus, Loxia, Passer, Bannermania, Cymochorea, Sula, Fregata, Bubo.*] **431**

Oberholser, H. C. A synopsis of the races of *Bombycilla garrula* (Linnaeus). Auk Cambridge Mass. **34** 1917 (330–333). **432**

Oberholser, H. C. Notes on the genus *Puffinus* Brisson. Auk Cambridge Mass. **34** 1917 (471–475). **433**

Oberholser, H. C. The migration of the North American Swallows. Bird-lore Harrisburg Pa **19** 1917 (320–330). **434**

Oberholser, H. C. The status of *Aphelocoma cyanotis* and its allies. Condor Hollywood Cal. **19** 1917 (94–95). **435**

Oberholser, H. C. A new subspecies of *Geothlypis beldingi.* Condor Hollywood Cal. **19** 1917 (182–184). **436**

Oberholser, H. C. Notes on the Fringilline genus *Passerherbulus* and its nearest allies. Ohio J. Sci. Columbus **17** 1917 (332–336). **437**

Oberholser, H. C. The Birds of the Anamba Islands. Washington D. C. Bull. U. S. Nat. Mus. No. **98** 1917 (iv + 75) map and 1 pl. **438**

Oberholser, H. C. Diagnosis of a new laniine family of Passeriformes. Washington J. Acad. Sci. **7** 1917 (180–181). **439**

Oberholser, H. C. Diagnosis of a new pycnonotine family of Passeriformes. Washington J. Acad. Sci. **7** 1917 (537–538). **440**

Oberholser, H. C. Description of a new *Sialia* from Mexico. Washington D. C. Proc. Biol. Soc. **30** 1917 (27–28). **441**

Oberholser, H. C. Mutanda ornithologica. Washington D.C. Proc. Biol. Soc. **30** 1917 (75–76 125–126). **442**

Oberholser, H. C. Description of a new genus of Anatidae. Washington D.C. Proc. Biol. Soc. Wash. **30** 1917 (119–120). **443**

Oberholser, H. C. *Piranga rubra rubra* in Colorado. Washington D.C. Proc. Biol. Soc. **30** 1917 (122). **444**

Oberholser, H. C. Autumn Water-bird records at Washington D.C. Washington D.C. Proc. Biol. Soc. **30** 1917 (122). **445**

Oberholser, H. C. Description of a new subspecies of *Perisoreus obscurus.* Washington D.C. Proc. Biol. Soc. Washington **30** 1917 (185–188). **446**

Oberholser, H. C. The Birds of Bawean Island, Java sea. Washington D.C. Proc. U. S. Nat. Mus. **52** 1917 (183–198). **447**

Oberholser, H. C. A review of the subspecies of the Leach Petrel, *Oceanodroma leucorhoa* (Vieillot). Washington Proc. U. S. Nat. Mus. **54** 1917 (165–172). **448**

Oberholser, H. C. Birds collected by Dr. W. L. Abbott on various islands in the Java Sea. Washington D.C. Proc. U. S. Nat. Mus. **54** 1917 (177–200). **449**

Oberholser, H. C. A co-operative bird census at Washington D.C. Wilson Bull. Oberlin Ohio **29** 1917 (18–29); also W. de W. **Miller** and C. H. **Rogers** (30–32). **450**

Ogilvie-Grant, W. R. Remarks on some recent collections of birds made by Mr. G. L. Bates in Cameroon. Ibis London **1917** (72–90) 1 pl. **451**

Oldys, H. The meaning of Bird-music. New York N.Y. Amer. Mus. Journ. **17** 1917 (123–127). **452**

Oort, E. D. van. Resultaten van het ringonderzoek van het Ryksmuseum te Leiden. [Resultate der Markierung durch das Reichsmuseum zu Leiden.] Ardea Leiden **6** 1917 (110–114). **453**

Oort, E. D. van. Ornithologische waarnemingen in Nederland. [Ornithologische Beobachtungen in den Niederlanden.] Ardea Leiden **6** 1917 (98–107). **454**

Oudemans, A. Dodo-studien. Naar aanleiding van de vondst van een gevelsteen met Dodo-beeld van 1561 te Vere. [Dodo-Studien, nach Anleitung des Fundes eines Giebelsteines mit Dodo-Bild von 1561 zu Vere.] Amsterdam Verh. K. Akad. Wet. 2e Sect. **19** No. 4 1917 (1–140 mit 41 Fig.) Auszug. Amsterdam Versl. Wis. Nat. Afd. K. Akad. Wet. **25** 1917 (924–925) (Holländisch). **455**

Oudemans, A. C. *Leguatia gigantea* Schleg. Ardea Leiden **6** 1917 (37–55) 1 pl. 2 text-figs. **456**

Oudemans, A. C. Mededeelingen door Dr. A. C. O. over zijne Dodo-Studien. Ardea Leiden **6** 1917 (74–79). **457**

Outes, F. F. Formación del Gabinete del Rey primeras contribuciones sudamericanas (1769). El Hornero Buenos Aires **1** 1917 (16–21). **458**

Owen, J. H. Notes on the breeding-habits of the Red-backed Shrike. Brit. Birds London **10** 1917 (175–180) 2 figs. **459**

Owen, J. H. and **Jourdain,** F. C. R. Curious nesting sites of Spotted Fly-catcher. Brit. Birds London **11** 1917 (87–88). **460**

Page, W. T. Some Toucans. Bird-Notes Ashbourne **8** 1917 (41–46) 4 pls. **461**

Palmer, T. S. In memoriam: Wells Woodbridge Cooke. Auk Cambridge Mass. **34** 1917 (119–132) portr. **462**

Palmer, T. S. Personalia in ornithology—Report of the committee on biography and bibliography. Auk Cambridge Mass. **34** 1917 (445–452). **463**

Palmer, T. S. Botta's visit to California. Condor Hollywood Cal. **19** 1917 (159–161). **464**

Paris, P. Oiseaux récemment disparus. Chalon-sur-Sáone Bull. Soc. Sci. Nat. **21** 1917 (1–5). **465**

Parkin, T. *vide* Nichols, J. B.

Paterson, D. R. *vide* Proger.

Paton, E. R. Some notes on the breeding-habits of the Merlin. Brit. Birds London **11** 1917 (29–30). **466**

Patten, C. J. Western Black-eared Wheatear (*Oenanthe hispanica hispanica*), on migration obtained on Tuskar Rock: a bird new to Ireland. Nov. Zool. Tring **24** 1917 (1–16) 1 pl. **467**

Pax, E. Wandlungen der schlesischen Tierwelt in geschichtlicher Zeit. Beitr. Naturdenkmalpflege **5** 1916 (414–472). **468**

Pearl, R. The selection problem. Amer. Nat. New York **51** 1917 (65–91). **469**

Pearl, R. The experimental modification of Germ cells: (i) General plan of experiments with ethyl alcohol and certain related substances (123–164) 3 figs. (ii) The effect upon the Domestic Fowl of the daily inhalation of ethyl alcohol and certain related substances (165–186) 4 figs. (iii) The effect of parental alcoholism and certain of the drug intoxications upon the progeny (241–310) 7 figs. J. Exper. Zool. Philadelphia **22** 1917. **470**

Pearl, R. *vide* Boring.

Pease, A. E. Thomas Hudson Nelson. Brit. Birds London **10** 1917 (205–209) portr. **471**

Pedersen, A. Nogle op tegnelser om Sydsjaellands Fugle. [Notes on the birds of south Zealand.] Kjöbenhavn Ornith. Tids. **11** 1917 (148–159). **472**

Pellinkhof, J. H. Eenige mededeelingen omtrent het voorkomen van den Ortolaan (*Emberiza hortulana*) in het Zuidwesten van Drenthe. [Einige Mitteilungen über das Vorkommen der Gartenammer im Südwesten von Drenthe.] Ardea Leiden **6** 1917 (90–92). **473**

Pelt Lechner, A. A. van. Overzicht der specimina in „Ootheca Wolleyana" als uit Nederland afkomstig vermeld staande. [Uebersicht der Specimina, welche im „Ootheca Wolleyana" als aus den Niederlanden herkünftig angegeben sind.] Ardea Leiden **6** 1917 (21–32). **474**

Perreau, G. A. Bakloh Aviary notes. Bird Notes Ashbourne **8** 1917 (5–10). **475**

Peters, J. L. Birds from the northern coast of the Dominican Republic. Cambridge Mass. Bull. Mus. Comp. Zoöl. **61** 1917 (391–426). **476**

Peters, J. L. The Porto Rican Grasshopper Sparrow. Washington D.C. Proc. Biol. Soc. **30** 1917 (95–96). **477**

Petit, L. *âiné.* L'arrivée des hirondelles et des martinets en 1917. Paris Bull. Soc. Zool. **42** 1917 (108–109). **478**

Petronievics, B. and **Woodward,** A. S. On the pectoral and pelvic arches of the British Museum specimen of *Archaeopteryx.* London Proc. Zool. Soc. **1917** (1–6) 1 pl. **479**

Pézard, A. Loi numerique de la régression des organes érectiles, consécutive à la castration post pubérale chez les Gallinacés. Paris C. R. Acad. Sci. **164** 1917 (734–736). **480**

Philipp, P. B. and **Bowdish,** B. S. Some summer birds of northern New Brunswick. Auk Cambridge Mass. **34** 1917 (265–275) 3 pls. **481**

Phillips, J. C. The Steamer Duck (*Tachyeres cinereus*). Ibis London **1917** (116–119); also **Blaauw** (274–276). **482**

Plaz, J. *Graf.* Zugsbeobachtungen aus dem Pongauer Ennstale. Orn. Jahrb. Hallein **28** 1917 (35–46). **483**

Plimmer, H. G. —Report on the deaths which occurred in the Zoological Gardens during 1916 etc., etc. London Proc. Zool. Soc. **1917** (27–35). **484**

Plocq, E. Sur quelques oiseaux de Lorraine. Rev. Franç. d'Orn. Paris **9** 1917 (125–126). **485**

Poliakov, G. I. Albinism and melanism in the Goldfinch. [Russian.] Mess. Ornith. Moscow **8** 1917 (126–127) 1 pl. **486**

Poncins, *Vicomte de.* Les migrations des Cols-verts. Rev. Franç. d'Orn. Paris 1917 (120–122). **487**

Porsild, M. P. Om nogle Vestgrønlandske Pattedyr og Fugle 1–11. Arbejder fra den Danske arktiske station paa Disko. No. 10 (31–54) fugle p. 54. København (Lunos) 1916 8vo. **488**

Potter, J. K. Unusual nesting site of the Least Bittern at Camden N.J. Cassinia Philadelphia No. **20** 1917 (14–17) photos. **489**

Preble, E. A. *vide* McAtee.

Proger, T. W. and **Paterson,** D. R. Ornithological notes for 1916. Cardiff Trans. Nat. Soc. **49** 1917 (67–69). **490**

Ramsay, J. and **Keene,** A. E. The Lyre Bird; some nesting notes. Austr. Zool. Sydney **1917** (81–82) 4 photos. **491**

Raspail, X. Nidification du Rougequeue *Tithys* et durée de l'incubation de son œuf. Paris Bull. Soc. Zool. 42 1917 (85–87). **492**

Rathbun, S. F. Description of a new subspecies of the Western Meadowlark. Auk Cambridge Mass. **34** 1917 (68–70). **493**

Ray, M. S. *vide* Hansen.

Reichenow [A.]. [On the forms of *Certhia brachydactyla.*] J. Ornith. Leipzig **65** 1917 (97). **494**

Reichenow [A.]. [*Phyllastrephus indicator* and its subspecific races]. J. Ornith. Leipzig **65** 1917 (115). **495**

Reichenow, A. *Turdus pondoensis, Dryonastes tsinlingensis, Bradypterus usambarae, Calamocichla palustris, Cinnicerthia paramosa, Turdinus tanganjicae, Ploceus quilimanensis, P. epipolius, P. pondoensis* spp. n. J. Ornith. Leipzig **65** 1917 (391–392). **496**

Reichenow [A.]. Ueber die Arten der Gattung *Sycalis*. J. Ornith. Leipzig **65** 1917 (513–514). **497**

Reichenow [A.]. *Gerygone stictilaema, Chætura buergersi* spp. n. J. Ornith. Leipzig **65** 1917 (514). **498**

Reichenow [A.]. Ueber den fahlbäuchigen Kleiber. (*Sitta caesia sordida*). Ornith. Monatsb. Berlin **25** 1917 (55–57). **499**

Reichling, H. Beiträge zur Avifauna des Münsterlandes. J. Ornith. Leipzig **65** 1917 (193–220). **500**

Reichling, H. Beiträge zur Vogelfauna des Münsterlandes. Münster Jahres-Ber. Westfal. Prov. Ver. **44** 1915–16 (154–168). **501**

Rendahl, H. Vom Abzug der schwedischen Waldschnepfen in den Jahren 1903–1912. Orn. Jahrb. Hallein **27** 1916 (26–33). **502**

Renshaw, G. The Celebean Maleo (*Megacephalum maleo*). Avicult. Mag. London **8** 1917 (168–170). **503**

Renshaw, G. The Secretary Bird and Mantell's Apteryx. Avicult. Mag. London **8** 1917 (334–341) photos. **504**

Relterer, E. et **Neuville, H.** De la rate des pigeons ou columbidés. Paris C. R. Soc. Biol. **80** 1917 (485–488). **505**

Relterer, E. et **Neuville, H.** Résultats généraux obtenus par l'étude de la rate d'une trentaire d'espèces d'oiseaux. Paris C. R. Biol. Soc. **80** 1917 (952–955). **506**

Richmond, C. W. The earliest name for the Nighthawk. Auk Cambridge Mass. **34** 1917 (88–89). **507**

Richmond, C. W. A new name for *Onychospiza* Prjev. Auk Cambridge Mass. **34** 1917 (89). **508**

Richmond, C. W. "One of the rarest birds." Auk Cambridge Mass. **34** 1917 (215–217). **509**

Richmond, C. W. Generic names applied to birds during the years 1906 to 1915, inclusive, with additions and corrections to Waterhouse's "Index Generum Avium." Washington D.C. Proc. U. S. Nat. Mus. **53** 1917 (565–636). **510**

Richmond, C. W. Description of two new birds from Haiti. Washington Smithson. Misc. Coll. **68** No. 7 1917 (1–3). **511**

Riddle, O. The control of sex ratio. Washington J. Acad. Sci. **7** 1917 (319–356). **512**

Ries, A. Die Vögel Bambergs und seiner Umgebung. Bamberg Ber. Nat. Ges. **1915** (331–426). **513**

Riley, J. H. An unrecorded bird (*Tyrannus tyrannus*) from the Bahamas. Auk Cambridge Mass. **34** 1917 (209). **514**

Riley, J. H. A bird (*Pinecola enucleator kamtschathensis*) new to the North American fauna. Auk Cambridge Mass. **34** 1917 (210). **515**

Rintoul, L. J. and **Baxter, E. V.** On the Pale-breasted or American Brent Goose in Scotland. Scot. Nat. Edinburgh **1917** (25–26); also **Chapman** and **Evans** *ibid* (74–77) **McWilliam** and **Robinson** *ibid* (99–100) **Robertson** and **Haigh** *ibid* (103–104) **Millais** *ibid* (215–217). **516**

Rintoul, L. J. and **Baxter, E. V.** Report on Scottish ornithology in 1916, including migration. Scot. Nat. Edinburgh **1917** (147–206). **517**

Rintoul, L. J. and **Baxter, E. V.** Autumn displays in our British birds. Scot. Nat. Edinburgh **1917** (265–270). **518**

Ritchie, J. The animal remains from Constantine's Cave, Fife Ness. Edinburgh Proc. Soc. Antiquaries Scotland **49** 1915 (251–253). **519**

Rivière, C. L'élevage de l'antruche à Madagascar. Difficultes et insuccès d'ordre général. Rev. Franc. d'Orn. Paris **9** 1917 (72–74 88–91 122–125 155–158). **520**

Roberts, A. Ornithological Notes: Classification of African Birds: New Records of Birds: New species and subspecies: Parasitism amongst Finches. Pretoria Ann. Transvaal Mus. **5** 1917 (246–262). **521**

Roberts, A. Descriptions of a new species and genus of Flycatchers from East Africa and two new subspecies of Guinea Fowls from South Africa. Pretoria Ann. Transvaal Mus. **6** 1917 (1–3). **522**

Robinson, H. C. On a collection of Birds from Pulau Langkawi and other islands on the north-west coast of the Malay Peninsula. J. Fed. Malay Mus. Singapore **7** 1917 (129–191). **523**

Robinson, H. W. Evidence for the breeding of the Green Sandpiper in Westmoreland in 1917. Brit. Birds London **11** 1917 (103–104 168) **524**

Robinson, H. W. Lanner Falcon in north Lancashire. Ibis London **1917** (462). **525**

Robinson, H. W. Some evidence corroborating the supposed breeding of the Green Sandpiper in the British Isles. Ibis London **1917** (611–612). **526**

Robinson, H. W. Ornithological report for north Lancashire for 1916. Lancs. Nat. Darwen **9** 1917 (299–302) also **10** 1917 (12). **527**

Rogers, C. H. *vide* Oberholser.

Rössler, E. Ornithologische Beobachtungen zwischen Dran und Krndija. Orn. Jahrb. Hallein. **28** 1917 (18–29). **528**

Rothschild, *Lord.* Remarks on *Tyto arfaki* Schleg. London Bull. B.O.C. **37** 1917 (17–19). **529**

Rothschild, *Lord.* On the status of *Lophophorus impejanus* Lath. and *L. refulgens* Temm. London Bull B.O.C. **37** 1917 (49–51). **530**

Rothschild, *Lord.* *Melanoperdix nigra borneensis* subsp. n. London Bull. B.O.C. **38** 1917 (3–4). **531**

Rothschild, *Lord.* Note on the African species of *Turtur* (*Chalcopelia* auct.). London Bull. Brit. Orn. Cl. **38** 1917 (25–26). **532**

Rothschild, *Lord* and **Hartert, E.** Review of the forms of *Lalage karu* inhabiting the Papuan subregion. London Bull. Brit. Orn. Cl. **37** 1917 (15–17). **533**

Rothschild, *Lord* and **Hartert, E.** *Myzomela eichhorni interposita* subsp. n. London Bull. B.O.C. **37** 1917 (38). **534**

Rüdiger, W. Ornithologische Beobachtungen in den Gouverments Kowno und Kurland. Arch. Naturges. Berlin **82a** 1917 (12–27). **535**

Rüdiger, W. Beiträge zur Nistweise der Schellente (*Fuligula clangula*). Ornith. Monatsb. Berlin **25** 1917 (10–12). **536**

Rust, H. J. An annotated list of the birds of Fremont county, Idaho, as observed during the summer of 1916. Condor Hollywood Cal. **19** 1917 (29–43) Map and 12 photos. **537**

Ruttledge, R. F. Ornithological notes from south Mayo. Irish Nat. Dublin **26** 1917 (148–151). **538**

Sabin, F. R. Preliminary note on the differentiation of angioblasts and the method by which they produce blood vessels, blood-plasma and red blood-cells as seen in the living chick. Anat. Rec. Philadelphia **13** 1917 (199–204). **539**

Sæmundssan, B. New or rare birds in Iceland (Icelandic). Reykjavik. Skyrsla nàtturupr. **1915-1916** (28–30). **540**

St. Quintin, W. H. Breeding notes of 1916. Avicult. Mag. London **8** 1917 (248–251). **541**

Sage, J. H. Description of Audubon. Auk Cambridge Mass. **34** 1917 (239–240). **542**

Sarudny, N. A. The representatives of the genus *Cynchramus* in the Russian Turkestan [Russian]. Mess. Ornith. Moscow **8** 1917 (38–56 98–116). **543**

Saxtorph, S. M. Nyere Meddelelser om Danske Fugle ii. [Recent notes on Danish birds.] Kjöbenhavn Ornith. Tids. **11** 1917 (101–147). **544**

Schaanning, H. T. L. Bidrag til Sidensvansens (*Ampelis garrulus* Lin.) biologi og morphologi. [On the structure and habits of *Ampelis garrulus*]. Kjöbenhavn Ornith. Tids. **11** 1917 (17–37) 10 figs. **545**

Schalow, H. Einige Bemerkungen zur Vogelfauna von Nowaja Semlja. J. Ornith. Leipzig **65** Bd. ii. 1917 (215–222). **546**

Schalow, H. Uber das Vorkommen von *Merops apiaster* L. in der Mark Brandenburg. Orn. Monatsb. Berlin **25** 1917 (156–159). **547**

Schenk, J. Fauna Regni Hungariae. Animalium Hungariae hucusque cognitorum enumeratio systematica Aves in memoriam Regni Hungariae mille abhinc annis constituti edidit Regia Societas Scientiarum naturalium Hungarica (1–114 Magyar and Latin) 1 map Budapest 1917 8vo. **548**

Schenk, J. Der Vogelzug in Ungarn in den Frühjahren 1915 und 1916. Aquila Budapest **23** 1917 (13–49 Magyar 438–444 German). **549**

Schenk, J. Altberühmte siebenbürgische Vogelsammlungen. Aquila Budapest **23** 1917 (163–195 Magyar, 468–482 German). **550**

Schiebel, G. Schneeammern (*Passerina nivalis* L.) und Zwergtrappe (*Otis tetrax*) in Krain 1914–1915. J. Ornith. Leipzig **65** Bd ii 1917 (223–225). **551**

Schiebel, G. Uber die Vögel der Insel Arbe (Nord-dalmatien). iii Teil: Ostern 1913 und Ostern 1914. Orn. Jahrb. Hallein **27** 1916 (82–87). **552**

Schiebel, G. Ornithologisches von einer Reise durch Süd-dalmatien (Insel Lissa, Spalato und Ragusa) im August 1913. Orn. Jahrb. Hallein **27** 1916 (87–94). **553**

Schiøler, E. L. *vide* Helms.

Schlegel, R. Die Rohrsänger des Leipziger Flachlandsgebietes mit besonderer Berücksichtigung ihrer Vorkommens in den Flussgebieten der weissen Elster, Pleisse, vereinigten und Zwickauer Mulde nach dem sächsischen Berglande und Erzgebirge zu. J. Ornith. Leipzig **65** 1917 (169–181). **554**

Schmitt, C. *vide* Stadler.

Schmitz, P. E. Tagebuchnotizen aus Tabgha am See Genesareth. Orn. Monatsber. Berlin **25** 1917 (75–78 92–94). **555**

Schuster, L. Ueber Vorkommen der Weidenmeise in Ostfrankreich. Orn. Monatsb. Berlin **25** 1917 (145–146). **556**

Schuster, L. Ueber das Vorkommen der Ammern in Nordostfrankreich. Orn. Monatsb. Berlin **25** 1917 (160–163). **557**

Schuster, L. Einige ornithologische Beobachtungen aus den Champagne. Orn. Monatsber. Berlin **25** 1917 (170–174). **558**

Schweppenburg, H. *Frhr.* G. von. Vogelzug in der westlichen Sahara. J. Ornith. Leipzig **65** 1917 (43–65). **559**

Schweppenburg, H. *Frhr.* G. von. Ins Land der Tuareg. J. Ornith. Leipzig **65** 1917 (242–312) map. **560**

Schweppenburg, H. *Frhr.* G. von. Otto le Roi zur Erinnerung. J. Ornith. Leipzig **65** 1917 435–443 portr. **561**

Schweppenburg, H. *Freiherr* G. von. Die ornithogeographische Stellung des Tuareg-Berglandes. J. Ornith. Leipzig **65** Bd ii 1917 (43–56). **562**

Sclater, W. L. The birds of Yemen, south-western Arabia, with an account of his journey thither by the collector, Mr. G. Wyman Bury. Ibis London **1917** (129–186) 2 pls. 1 text-fig. **563**

[Sclater, W. L.] Obituary-Capt. F. C. Selous, Baron Lucas and Dingwall, Commander the Hon. R. O. B. Bridgeman, R.N., T. H. Nelson, Dr. E. A. Mearns, Prof. F. E. L. Beal. Ibis London **1917** (244–251). **564**

Sclater, W. L. On a new South American Jay of the genus *Cyanolyca*. Ibis London **1917** (465–466) pl. viii. **565**

Sclater, W. L. Obituary. Prof. E. A. Goeldi, Dr. E. P. Ramsay. Ibis London **1917** (613–617). **566**

Sclater, W. L. A remarkable variation in *Pœocephalus meyeri*. London Bull. B. O. C. **37** 1917 (32). **567**

Sclater, W. L. Note on *Francolinus gariepensis jugularis* and *F. g. pallidior*. London Bull. B. O. C. **37** 1917 (46–47). **568**

Sclater, W. L. Note on British examples of *Neophron percnopterus* and *Catharacta skua*. London Bull. Brit. Orn. Club **38** 1917 (13–14). **569**

Sclater, W. L., Mackworth-Praed, C. W. and **Hartert, E.** A note on the British Puffin. Brit. Birds London **11** 1917 (162–166). **570**

Scoville, S. The Evening Grosbeak (*Hesperiphona v. vespertina*) in south New Jersey and Pennsylvania. Auk Cambridge Mass. **34** 1917 (210–212). **571**

Sell, R. A. Some notes on the effects upon bird life, of the Corpus Christi storm of August 18, 1916. Condor Hollywood Cal. **19** 1917 (43–46). **572**

Selous, E. Habits of the Great Crested Grebe. Auk Cambridge Mass. **34** 1917 (110–112). **573**

Selous, E. Ornithological observations and reflections in Shetland. Naturalist London **1917** (89–92 260–269). **574**

Selva, M. Distracciones ornitológicas. El Hornero Buenos Aires **1** 1917 (22–29). **575**

Sheppard, T. On arranging Museum cases for Birds. Naturalist London **1917** (61–68). **576**

Shufeldt, P. W. Nesting of the Chiapas Blue Grosbeak (*Guiraca caerulea chiapensis*). Auk Cambridge Mass. **34** 1917 (480–481). **577**

Shufeldt, R. W. Fossil birds found at Vero, Florida, with descriptions of new species. 9th Ann. Rep. Florida State Geol. Surv. **1917** (35–42) 2 pls. also Journ. Geol. Chicago **25** 1917 (18–19). **578**

Shufeldt, R. W. Fossil remains of what appears to be a Passerine Bird from the Florissant shales of Colorado. Washington D.C. Proc. U.S. Nat. Mus. **53** 1917 (453–455) 2 pls. **579**

Shelton, A. C. A distributional list of the Land-birds of west central Oregon. Eugene City Or. Univ. Oregon Bull. **14** 1917 (1–51) map 10 figs. **580**

Simes, J. A. Aspects of bird life in Europe. London Trans. Nat. Hist. Soc. **1916** 1917 (77–89). **581**

Sitowski, Ptaki Pienin. [Vögel des Pienin]. Krakow Spraw. Kom. fizyogr. **1916** (44–81) Polish with German resumé. **582**

Skinner, M. P. The Ospreys of the Yellowstone. Condor Hollywood Cal. **19** 1917 (117–121) fig. **583**

Skinner, M. P. The birds of Molly Island, Yellowstone National Park. Condor Hollywood Cal. **19** 1917 (177–182). 2 photos. **584**

Skovgaard, P. Yngletiden i Esbjergegnen. Iagttagelser fra 1915, 1916 og 1917. [The breeding season near Esbjerg, notes for 1915–17.] Kjöbenhavn Ornith. Tids. **11** 1917 (160–171). **585**

Sladen, H. G. L. Notes on birds recently observed in Macedonia. Ibis London **1917** (429–433). **586**

Smalley, F. W. Occurrence of the Buff-backed Heron (*Ardeola ibis ibis*) in Norfolk. Brit. Birds London **11** 1917 (146–147) photo. **587**

Smith, A. P. Some birds of the Davis mountains, Texas. Condor Hollywood Cal. **19** 1917 (161–165). **588**

Smith, F. The correlation between the migratory flights of birds and certain accompanying meteorological conditions. Wilson Bull. Oberlin Ohio **29** 1917 (32–35). **589**

Snouckaert van Schauburg, *Baron* R. H. H. ter Meer. Darventer Club Jaarber Ned. Vogelk. J.B. **7** 1917 (3–4) portr. **590**

Snouckaert van Schauburg, R. Ornithologie van Nederland. Waarnemingen van 1 October 1916 tot en met 30 September 1917. [Ornithologie der Niederlande. Beobachtungen vom 1. Oktober 1916 bis zum 1. Oktober 1917.] Daventer Club Jaarber Nederl. Vogelk. J.B. **7** 1917 (15–23) 1 Taf. **591**

Snouckaert van Schauburg, R. Wyzigingen in de namen van eenige vogelsoorten. [Aenderungen in den Namen einiger Vogelarten.] Daventer Club Jaarber. Nederl. Vogelk. J.B. **7** 1917 (42–44). **592**

Snouckaert van Schauburg, R. Over de verbreiding van „*Coccycolius iris.*" [Ueber die Verbreitung von „*Coccycolius iris.*"] Daventer Club Jaarber. Nederl. Vogelk. J.B. **7** 1917 (45–46). **593**

Snouckaert van Schauburg, R. Gele Kwikstaarten. [Gelbe Bachstelze.] Daventer Club Jaarber. Nederl. Vogelk. J.B. **7** 1917 (47–54). **594**

Snouckaert van Schauburg, R. Drie zomers aan zee. [Drei Sommer am Meere.] Daventer Club Jaarber. Nederl. Vogelk. J.B. **7** 1917 (55–86). **595**

Someren, V. G. L. van. A rare forest Francolin, *Francolinus lathami schubotzi.* J. E. Afr. and Uganda N.H. Soc. **6** 1917 (139–140) col. pl. **596**

Spurrell, J. A. Annotated list of the Water Birds, Game Birds and Birds of Prey of Sac County, Iowa. Wilson Bull. Oberlin Ohio **29** 1917 (141–160). **597**

Squires, W. A. *vide* Hansen.

Stadler, H. Uebende Buchfinken. J. Orn. Leipzig **65** 1917 (465–467). **598**

Stadler, H. Vom Zug der Mauersegler (*Micropus apus apus* (L.)) im Maintal 1916. München Verhandl. Ornith. Ges. **13** 1917 (74–86). **599**

Stadler, H. Einiges von der Heckenbraunelle, Pfiffe, Balzflug, "Laubvogelrufe" (*Accentor*). Orn. Monatsber. Berlin **25** 1917 (72–75). **600**

Stadler, H. und Schmitt, C. Fragen und Aufgaben der Vogelsprachkunde. J. Ornith. Leipzig **65** Bd. ii 1917 (226–236). **601**

Stadler, H. u. Schmitt, C. Die Rufe der Mauersegler. München Verhandl. Orn. Ges. **13** 1917 (152–157). **602**

Standen, R. and Coward, T. A. Burnet and other reputed unpalatable moths eaten by birds. Lancs. Nat. Darwen **10** 1917 (133–136), also **Wilkinson, O. J.** *t.c.* p. 169. **603**

Stechow, E. Ornithologische Beobachtungen aus Bad Nauheim. München Verhandl. Ornith. Ges. **13** 1917 (53–60). **604**

Stephens, T. C. Bert Heald Bailey. Wilson Bull. Oberlin Ohio **29** 1917 (195–197). **605**

Stoddard, H. L. Notes on a few of the rarer birds of Sauk and Dane counties, Wisconsin. Auk Cambridge Mass. **34** 1917 (63–67). **606**

Stoddard, H. L. The Roseate Tern (*Sterna dougalli*) on Lake Michigan. Auk Cambridge Mass. **34** 1917 (86). **607**

Stolz, J. W. Ornithologische Ausbeute aus Polen im Sommer 1916. J. Ornith. Leipzig **65** 1917 (368–389). **608**

Stone, A. C. Description of the eggs and nesting-place of *Strix candida* Tickell (*Tyto longimembris walleri* Mathews), Australian Grass Owl. Emu Melbourne **17** 1917 (39–40). **609**

S[tone], W. Origin of the generic name *Æthia*. Auk Cambridge Mass. **34** 1917 (229–230). **610**

Stone, W. Report on spring migration of 1916. Cassinia Philadelphia No. **20** 1917 (24–41). **611**

Stone, W. A new Hummingbird from Colombia. Philadelphia Pa. Proc. Acad. Nat. Sci. **69** 1917 (203–204). **612**

Stoney, R. F. The weights of Pintail and Fantail Snipe. Bombay J. Nat. Hist. Soc. **25** 1917 (306). **613**

Storer, T. I. *vide* Grinnell.

Stresemann, E. Beobachtungen über die Höhe des Seglerfluges. München Verhandl. Ornith. Ges. **13** 1917 (50–52). **614**

Stresemann, E. Ueber gemischte Vogelschwärme. München Verhandl. Orn. Ges. **13** 1917 (127–151). **615**

Stresemann, E. Die Verwendbarkeit des Entfernungsmessers zur Ermittelung der Flughöhe. München Verhandl. Orn. Ges. **13** 1917 (171–173). **616**

Strohl, J. Conrad Gessner's "Waldrapp." Versuch einer Ergänzung und textkritischen Ordnung des vorhandenen Materials. Zürich Vierteljahrsch. Natf. Ges. **62** 1917 (501–538) 6 figs. **617**

Strong, R. M. Some observations on the origin of melanin pigment in feather germs from the Plymouth Rock and Brown Leghorn Fowls. Anat. Rec. Philadelphia **13** 1917 (97–108) 6 figs. **618**

Strong, R. M. An improved observation tent. Auk Cambridge Mass. **34** 1917 (290–293) 1 pl. **619**

Stubbs, F. J. On a blue egg of the Lapwing. Essex Nat. Stratford **18** 1917 (105–106). **620**

Stubbs, F. J. Notes on certain breeding habits of the Snipe. Essex Nat. **18** 1917 (109–110). **621**

Stubbs, F. J. The London Gulls. London Trans. Nat. Hist. Soc. **1916** 1917 (37–41). **622**

Studer, T. and Burg, G. *von.* Verzeichnis der schweizerischen Vögel und ihre Verbreitungsgebiete. Neubearbeitet auf Grund des Kataloges der in der Schweiz beobachteten Vögel mit Fragenschema der schweizerischen Kommission. (1-92) 1 Kart. Bern 1916 8vo. **623**

Swaen, A. E. H. Byzonderheden betreffende de gierzwaluw [*Apus apus* (L)]. [Besonderheiten über die Turmschwalbe. *Apus apus* (L)]. Ardea Leiden **6** 1917 (32–35 114–120). **624**

Swann, H. K. *vide* Mullins.

Swarth, H. S. A revision of the Marsh Wrens of California. Auk Cambridge Mass. **34** 1917 (308–318) map. **625**

Swarth, H. S. Geographical variation in *Sphyrapicus thyroideus.* Condor Hollywood Cal. **19** 1917 (62–65). **626**

Swarth, H. S. Observations on some Fresno County birds. Condor Hollywood Cal. **19** 1917 (129–130). **627**

Swarth, H. S. and Bryant, H. C. A study of the races of the Whitefronted Goose (*Anser albifrons*) occurring in California. Berkeley Cal. Univ. Cal. Publ. Zool. **17** (209–222) 1 pl. 2 text-fig. **628**

Swynnerton, C. F. M. Colours of the eggs and the nests of birds. Ibis London **1917** (268–272). **629**

Tåning, A. V. Storken (*Ciconia alba*) i Danmark. Kjöbenhavn Ornith. Tids. **11** 1917 (49–84). **630**

Taverner, P. A. Preliminary list of specimens [of birds] taken by C. L. Patch, near Barkley Sound, Vancouver Island, between December 16, 1915, and January, 1 1916. Ottawa Summary Rep. Geol. Surv. for **1916** 1917 (355–357). **631**

Taverner, P. A. Preliminary list of specimens taken by C. H. Young and Wm. Spreadborough, at Brackendale, Lillooet and McGillivray Creek, British Columbia, between June 11 and September 12, 1916. Ottawa Summary Rep. Geol. Surv. for **1916** 1917 (359–368). **632**

Tavistock, *Marquis of.* Australian Parrots: Moult of Owl's beaks. Ibis London **1917** (637–639). **633**

Taylor, W. S. The Bobwhite [*Colinus virginianus texanus*]. Austin Univ. Texas Bull. No. **1748** 1917 (1–26) photos. **634**

Terrill, L. McI. Horned Larks in the Province of Quebec. Wilson Bull. Oberlin Ohio **29** 1917 (130–141). **635**

Theobald, F. V., McGowan, W. and Leigh, H. S. Report on the food found in the Rook, Starling and Chaffinch. Journ. Bd. Agriculture London Suppl. No. **15** 1916 (7–56). **636**

Thiebout, C. H. Raven in Nederland. Ardea Leiden **6** 1917 (64–65). **637**

Thienemann, J. XVI. Jahresbericht (1916) der Vögelwarte Rositten der Deutschen Ornithologischen Gesellschaft. J. Ornith. Leipzig **65** 1917 (313–367). **638**

Thienemann, J. Treffen die Zugvögel Vorbereitungen zu ihren Reisen? J. Ornith. Leipzig **65** Bd. ii **1917** (237–260). **639**

Thienemann, J. Vögelwarte Rositten (Tannenhäherzüge). Orn. Monatsber. Berlin **25** 1917 (174–176). **640**

Thomas, R. H. *vide* Bateson.

Thomas, W. B. and Collett, A. K. Birds through the year (viii + 366). Many col. illustr. and textfigs. London (Jack) [1917] 4to. **641**

Tischler, F. Das männliche Jugendkleid der Schellente (*Nyroca clangula*). Falco Halle 1915. **642**

Tischler, F. Die Kleider des Fichtenkreuzschnabels (*Loxia curvirostra*). J. Ornith. Leipzig **65** Bd. ii 1917 (261–268). **643**

Tischler, F. *Limicola platyrincha* im Binnenlande von Ostpreussen erlegt. Orn. Monatsb. Berlin **25** 1917 (146–147). **644**

Tjebbes, K. Sur les rapports génétiques entre *Thaumalea picta* et *Thaumalea obscura* Schlegel d'après les études expérimentales de M. le Dr. J. H. Krimmel (†). Haarlem Arch. Néerl. Sci. Soc. Holl. (3) **3** 1917 (316–323). **645**

Todd, W. E. C. Preliminary diagnoses of apparently new Birds from Columbia and Bolivia. Washington D.C. Proc. Biol. Soc. **30** 1917 (3–6). **646**

Todd, W. E. C. New genera, species and subspecies of South American birds. Washington D.C. Proc. Biol. Soc. **30** 1917 (127–130). **647**

Townsend, C. W. The Labrador Chicadee (*Penthestes hudsonicus nigricans*) in a southward migration. Auk Cambridge Mass. **34** 1917 (160–163). **648**

Townsend, C. W. In Audubon's Labrador. Auk Cambridge Mass. **34** 1917 (133–146) 3 pls. **649**

Trotter, S. William P. Turnbull. Cassinia Philadelphia No. **20** 1917 (1–6) portr. **650**

Troxell, E. L. Oligocene fossil eggs. Washington J. Acad. Sci. **6** 1916 (422–425) 2 figs. **651**

Tschermak, A. *von.* Ueber das verschiedene Ergebnis reziproker Kreuzung von Hühnerrassen und über dessen Bedeutung für die Vererbungslehre. (Theorie der Anlagenschwächung oder Genasthenie. Biol. Zentralb. Leipzig **37** 1917 (217–277) 12 figs. **652**

Tschusi zu Schmidhoffen, V. *Ritter von.* Ueber das einstige Vorkommen des Bartgeiers (*Gypaëtus barbatus*) im österreichischen Alpengebiete. J. Ornith. Leipzig **65** Bd. ii 1917 (269–277). **653**

Uchida, S. Mallophaga from Birds of Formosa. Tokyo J. Coll. Agr. **3** 1917 (171–188) 1 pl. 1 text fig. **654**

Uchida, S. Kyushyu san Namiye-Gera no hyohon ni tsuite. [On a specimen of *Dryobates leucotos namiyei* Stejn.) Tori [Bird] Tokyo No. **4** 1917 (1–5). **655**

Uchida, S. Honshyu oyobi Kyushyu ni okeru tsuru no toratchi. [Localities in Honshyu and Kyushyu visited by the Cranes.] Dobuts Z. Tokyo **29** 1917 (Prelude 15–18 with pl.). **656**

Vries G., de. Mededeelingen betreffende Nederlandsche broedvogels. [Mitteilungen über holländische Brutvögel.] Ardea Leiden **6** 1917 (92–98). **657**

Waite, E. R. *vide* White, S. A.

Waite, H. W. The breeding of the White-eared Bulbul (*Molpastes leucotis*). Bombay J. Nat. Hist. Soc. **25** 1917 (297). **658**

Waite, H. W. The breeding of the Gull-billed Tern (*Sterna anglica*). Bombay J. Nat. Hist. Soc. **25** 1917 (300–301). **659**

Walker, A. Some birds of central Oregon. Condor Hollywood Cal. **19** 1917 (131–140) map and photo. **660**

Wallis, H. M. Mortality among birds during the February frost in west Cornwall. Brit. Birds London **10** 1917 (267–268). **661**

Warner, D. E. *vide* Harris.

Watzinger, A. Ornithologisches aus Gmunden und Umgebung. Orn. Jahrb. Hallein **28** 1917 (46–47). **662**

Watzinger, A. Am Neste des Eulenzeisigs. Orn. Jahrb. Hallein **28** 1917 (47–49). **663**

Wayne, A. T. A list of Avian species for which the type locality is South Carolina. Charleston Contrib. Mus. **3** 1917 (i-vi + 1–8). **664**

Wesemüller, A. Der Glaube an Vogelwinterschlaf und seine ursprüngliche Grundlage. J. Ornith. Leipzig **65** 1917 (221–227). **665**

Wetmore, A. On the fauna of Great Salt Lake. Amer. Nat. New York **51** 1917 (753–755). **666**

Wetmore, A. The birds of Culebra Island, Porto Rico. Auk Cambridge Mass. **34** 1917 (51–62). **667**

Wetmore, A. An abnormal egg of *Fulica americana.* Condor Hollywood Cal. **19** 1917 (65–66) 1 fig. **668**

Wetmore, A. The relationships of the fossil bird *Palaeochenöides mioceanus.* J. Geol. Chicago **26** 1917 (555–557) text-fig. **669**

Wetmore, A. A new Cuckoo from New Zealand. Washington D. C. Proc. Biol. Soc. **30** 1917 (1–2). **670**

Wetmore, A. A new Honey-eater from the Marianne Islands. Washington Proc. Biol. Soc. **30** 1917 (117–118). **671**

Wetmore, A. On certain secondary sexual characters in the male Ruddy Duck. *Erismatura jamaicensis* (Gmelin). Washington D. C. Proc. U. S. Nat. Mus. **52** 1917 (479–482). 1 fig. **672**

Wetmore, A. *vide* McAtee.

Wettstein, O. *von.* Berichtigungen und Ergänzungen zur Ornis des Gschnitztales bei Steinach am Brenner, Tirol. Orn. Jahrb. Hallein **28** 1917 (29–35). **673**

White, H. L. North Australian Birds. Emu Melbourne **16** 1917 (117–158) map. **674**

White, H. L. Descriptions of new or rare eggs. Emu Melbourne **16** 1917 (159–164) 2 pls. **675**

White, H. L. Description of a new Honey-eater of the genus *Ptilotis* from North Australia. Emu Melbourne **16** 1917 (165). **676**

White, H. L. North Australian Birds. Observed by Wm. M'Lennan. Emu Melbourne **16** 1917 (205–231) 1 pl. **677**

White, H. L. Description of nest and eggs of the Rufous-crowned Emu-Wren (*Stipiturus ruficeps* Campbell). Emu Melbourne **17** 1917 (39). **678**

White, S. A. In the Far North-East. A scientific expedition (1–144). Many photos. Adelaide (Thomas) [1917] 8vo. **679**

White, S. A. The Cruize of the Avocet in search of Skuas and other things (1–68). Many photos. Adelaide (Thomas) [1917] 8vo. **680**

White, S. A. A sketch of the life of Samuel White—ornithologist, soldier, sailor and explorer. Adelaide S. Austr. Orn. **3** 1917 (19–22 44–49 83–87 117–122). **681**

White, S. A. Further notes upon the Arctic Skua (*Stercorarius parasiticus*). Adelaide S. Austr. Orn. **3** 1917 (38–39). **682**

White, S. A. New record for South Australian waters—Finding the Flesh-footed Petrel (*Puffinus carneipes* Gould). Adelaide S. Austr. Orn. **3** 1917 (39). **683**

White, S. A. Results of the South Australian Museum Expedition to Strzelecki and Cooper creeks, September and October, 1916. Aves. Adelaide Trans. R. Soc. S. Austr. **41** 1917 (441–466) 1 pl. **684**

White, S. A. Everard Range Tit-Warbler (*Acanthiza marianae*). Emu Melbourne **16** 1917 (158–159) pl. xxxii. **685**

White, S. A. Description of nest and eggs of the Desert Chat (*Ashbyia lovensis*, Ashby). Emu Melbourne **6** 1917 (165–167) 2 pls.; also **Waite** ibid. (167–168). **686**

White, S. A. Record of a new Tree-creeper for South Australia. Emu Melbourne **16** 1917 (168–169). **687**

White, S. A. Cooper's Creek Tree-creeper (*Climacteris waitei*). Emu Melbourne **17** 1917 (1) pl. 1. **688**

Whitley, H. Successful breeding of Sulphur-crested Cockatoos (*Cacatua galerita*). Bird-Notes, Ashbourne **8** 1917 (61–65) photos. **689**

Whymper, S. L. On a cinnamon-coloured variation of the Red Grouse. London Bull. B. O. Cl. **37** 1917 (24). **690**

Wiglesworth, J. The Little Owl (*Athene noctua*) in Somerset. Taunton Proc. Somerset Archaeol. Nat. Hist. Soc. **63** 1917 (152–161), map. **691**

Wilkinson, O. J. *vide* Standen.

Willett, G. Further notes on the birds of Forrester Island, Alaska. Condor Hollywood Cal. **19** 1917 (15–17). **692**

Williamson, W. J. F. The birds of Bangkok. Bangkok J. Nat. Hist. Soc. **2** 1917 (185–214). **693**

Wilson, F. E. Description of the Winiam Tit-Warbler, *Acanthiza winiamida* sp. nov. Emu Melbourne **16** 1917 (169–170). **694**

Witherby, H. F. On some results of ringing Song-Thrushes, Blackbirds, Lapwings and Woodcock. Recovery of marked birds. Brit. Birds London **10** 1917 (215–224). **695**

Witherby, H. F. "Continental" Wood-Pigeons and Blackbirds. Brit. Birds London **10** 1917 (273–274). **696**

Witherby, H. F. The moults of the British Passeres, with notes on the sequence of their plumages. Brit. Birds London **10** 1917 (280–290) **11** 1917 (15–19 31–42). **697**

[**Witherby, H. F.**] Recovery of marked birds. British Birds London **11** 1917 (156–159). **698**

Witherby, H. F. On a new Tree-Pipit from N.W. India. London Bull. B.O.C. **37** 1917 (43). **699**

Witherby, H. F. Note on *Anthus campestris* and *Oenanthe hispanica*. London Bull. B.O.C. **37** 1917 (56–57). **700**

Wood, C. A. The fundus oculi of birds, especially as viewed by the ophthalmoscope. A Study in comparative anatomy and physiology (1–180) 61 pls. 145 text-figs. Chicago (Lake Press) 1917 l. 8vo. **701**

Woodward, A. S. *vide* Petronievics.

Wright, A. H. *vide* Bishop.

Wright, H. W. The Orange-crowned Warbler as a fall and winter visitant in the region of Boston, Massachusetts. Auk Cambridge Mass. **34** 1917 (11–27). **702**

Wright, H. W. Labrador Chickadee (*Penthestes hudsonicus nigricans*) in Boston and vicinity in the fall of 1916. Auk Cambridge Mass. **34** 1917 (164–170). **703**

Zaliesski, I. M. *Alauda arvensis kiborti* subsp. nov. [Russian.] Mess. Ornith. Moscow **8** 1917 (125). **704**

Zedlitz, O. *Graf* von. und **Trützschler**, Liste der in Gebiete der Schara beobachteten Vögel. J. Ornith. Leipzig **65** Bd. ii 1917 (278–308) map. **705**

Zietz, F. R. Note on the Little Black Cormorant (*Mesocarbo ater* Lesson Adelaide S. Austr. Orn. **3** 1917 (82). **706**

Zietz, F. R. The Grey-faced Petrel (*Pterodroma macroptera* Smith), a new record for the S. A. Coast. Adelaide S. Austr. Orn. **3** 1917 (116–117). **707**

II.—SUBJECT INDEX.

N.B.—For full Reference vide Titles.

COMPREHENSIVE AND GENERAL. **5803**

History.

Farley, 181; Hildebrandt, 282; Outes, 458; Strohl, 617; Wesemüller, 665.

Biography.

General; **Burns, 102; Mullins & Swann, 413; Palmer, 463.**

Special; **J. J.** Audubon, **Sage, 542; P. E.** Botta, **Palmer, 464**; S. Diggles (1817-1880), **Mathews, 387; J.** Hunt, **Gladstone, 210; J. F.** Naumann, **Heinroth, 260; E. L.** Shores, **Henninger, 272; W. P.** Turnbull (1830-1871), **Trotter, 650**; S. White, **S. A. White, 681.**

Biography – Obituary Notices.

B. H. Bailey, **Stephens, 605**; F. E. L. Beal, **M. C. Atee, 366; Sclater, 564**; R. O. B. Bridgeman, **Sclater, 564**; W. W. Cooke, **Palmer, 462**; D. G. Elliot, **Chapman, 117**; E. A. Goeldi, **Sclater, 566**; O. Herman, **Chernel, 120**; O. Le Roi, **Schweppenburg, 561**; Baron Lucas & Dingwall, **Sclater, 564**; E. A. Mearns, **Sclater, 564**; H. H. ter Meer, **Snouckaert, 590**; T. H. Nelson, **Pease, 471; Sclater, 564**; A. J. North, **Anon, 15**; C. P. Ramsay, **Anon, 14; Etheridge, 177; Sclater, 566**; F. C. Selous, **Chapman, 114; Sclater, 564**, pl. vi; B. H. Woodward, **Anon, 13.**

General Treatises.

Thomas & Collett, 641.

Bibliography.

Gladstone, 209; Hopkinson, 290; Jacobi, 306; Koske, 334; McAtee, 366; Mathews, 387; Mullens & Swann, 413; Palmer, 463; Schenk, 548.

Institutions and Collections.

New York Zool. Park, **Crandall, 142, 143**; Naumann Library, **Gottschalk, 213**; Rositten Bird-watching Station **Thienemann, 638.**

Technique.

Fuye, 199; Sheppard, 576; Strong, 619.

Economics (see also under Food-habits, p. 33).

Berry, 60; Collinge, 135, 136; Fitz-Simmons, 188; Froggatt, 197; Godard, 211; Gunther, 222; Hennicke, 271; McAtee, 368; Rivière, 520; Theobald McGovan & Leigh, 636.

Bird-Protection.

Ibath, 301; Taylor, 634.

Acclimatization.

Gunther, 223; Ingram, 303.

Aviculture.

Bailey, 31, 32, 33, 34; Blaauw, 64, 65, 66; Braun, 86; Crandall, 142, 143; Hopkinson, 291, 292; Page, 461; Perreau, 475; St. Quentin, 541, Whitley, 689.

Nomenclature.

GENERAL PRINCIPLES, Dahl, 151.

CHANGES AND EMENDATIONS; A.O.U. Committee, 16; Brasil, 82; Hartert, 247, 248; Laubmann, 345; Mathews, 381, 388; Mathews & Iredale, 390; Oberholser, 431, 433, 442; Richmond, 507, 508, 510; Snouckaert, 592; Stone, 610.

VERNACULAR NAMES, Despott, 155; McAtee, 369.

Phylogeny & Classification.

Chapin, 113; Selva, 575.

STRUCTURE. 5807

Plumage and epithelial structures.

Chapin, 113; Gyldenstolpe, 226; Hartley, 51.

Nervous System and Sense Organs.

Greschik, 216; Hahn, 231; Hollaender, 288; Wood, 701.

Osteology.

Chapin, 113; Erdmann, 176; Foote, 189; Knopfli, 328.

Circulatory and Glandular System.

Retterer & Neuville, 505, 506.

Respiratory System.

Myers, 416; Wetmore, 672.

Urino-genital System.

Boring & Pearl, 71; Danchakoff, 152; Hartert, 242.

General Anatomy of Special Forms.

Archaeoptoryx, Petronievics & Woodward, 479; *Ampelis garrulus*, Schaaning. 545; *Jacana, Crotophaga, Caprimulgus. Pitangus, Empidonomus*, Hartley, 51.

PHYSIOLOGY. 5811

Nervous System and Sense Organs.

Hahn, 231; Wood, 701.

Digestion and Nutrition.

McAtee, 367.

Respiration.

Myers, 416.

Reproduction.

Danchakoff, 152; Pezard, 480.

EMBRYOLOGY. 5815

Epithelial, Muscular and Skeletal Systems.

Knopfli, 328; Strong, 618.

Respiratory and Vascular systems.

Myers, 416; Sabin, 539.

Reproductive System.

Danchakoff, 152.

Embryology of special forms.

Jacana, Crotophaga, Caprimulgus, Hartley, 51.

ETHOLOGY. 5819

General and Miscellaneous.

Simes, 581; Stresemann, 615.

Food-habits.

General: Chick & Hume, 121, 122; Standen & Coward; 603.

The food habits of:—*Coracias*, Hammling, 233; *Phalacrocorax*, Morgan, 408; *Corvus, Sturnus, Fringilla*, Theobald, McGowan & Leigh, 636.

Migration.

General: Alexander, 3; Cathelin, 112; Smith, 589; Thienemann, 639.

Regional Observations: British Isles, Begg, 52; Curtis,, 146; Moffat, 407; Nicholson, 425; Rintoul & Baxter, 517.

France, Petit, 478.

Germany, Auel, 25; Helfer, 262; Krüss, 337.

Austro-Hungary, Hegyfoky, 259; Noggler, 428; Plaz, 483; Schenk, 549

Holland, Ekama, 175; Swaen, 624; Vries, 657.

Denmark, Hørring, 294.

Malta, Despott, 155.

North Africa, Boyd, 77; Schweppenburg, 559.

Japan, Uchida, 656.

North America, Bowles, 75; Brimley, 89; Oberholser, 434; Stone, 611.

Migration of single species or groups.

Cuculus, Bretscher, 88; *Scolopax*, Douglas, 171; *Aeronautes*, Hanna, 235; *Anas*, Poncins, 487; *Scolopax*, Rendahl, 502; *Micropus*, Stadler, 599; *Caryocatactes*, Thienemann, 640.

Bird-marking experiments and results.

Clarke, 130; Hess, 277; Menegaux, 395; Oort, 453; Thienemann, 638; Witherby, 695, 698.

Flight.

Stresemann, 614, 616.

Sexual Relations and Display.

Dunlop, 173; Lucanus, 361; Meiklejohn, 393; Riddle, 512; Rintoul & Baxter, 518.

Nidification (General).

Bergtold, 55; Kennedy, 317; Mousley, 411; Swynnerton, 629.

Nidification (Regional observations).

Holland, Burg, 99; Pelt-Lechner, 474.

Macedonia, Clarke, 129.

Australia, Campbell & Barnard, 107; White, H. L., 675.

Neotropical Region. Beebe & Hartley, 51; Doello-Jurado, 163.

Nearctic Region, Philipp & Bowdish, 481.

Nidification (observations on single species, *vide* Pt. III. Systematic).

Arundel, 19; Baker, 39; Baker & Jourdain, 42; Bales, 43; Bellchambers, 54; Blaauw, 66; Bradbury, 79; Bunyard, 96, 97; Burtch, 103; Carroll, 109; Dixon, 159; Dobbrick, 160, Hanna, 235; Havilland, 258; Howe, 296; Jourdain, 309, 310; Klein, 324; Meares, 391, 392; Meiklejohn, 393; Merikallio, 397; Merriam, 398; Meyere, 399; Owen, 459; Owen & Jourdain, 460; Paton, 466; Potter, 489; Ramsay & Keene, 491; Raspail, 492; Rudiger, 536; Schaanning, 545; Shufeldt, 577; Stone, 609; Stubbs, 620; White, H. L., 678; White & Waite, 686.

Oology (*see also under* Nidification).

Foster, 193; Harris and others, 237, 238; Mousley, 411; Wetmore, 668.

Voice.

General: Alexander, 3; Andersen 8; Braun, 84, 85; Fénis, 183; Hoffman, 284, 286; Oldys, 452; Stadler, 598, Stadler u. Schmidt, 601.

On the song or call-note of:—*Ammodramus*, Allard, 7; *Cypselus*, Hoffman, 285; *Accentor*, Stadler, 600; *Cypselus*, Stadler & Schmitt, 602.

Psychology.

Braun, 84.

Colour and Moult.

Bowles, 73; Ewart & Mackenzie, 180; Heinroth, 261; Jackson, 304; McAtee, 367; Tischler, 643; Witherby, 697.

Pathology.

Braun, 85; Chick & Hume, 121, 122; Plimmer, 484.

Avian Parasitology.

Cholodkovsky, 124; Johnston, 307; Roberts, 521; Uchida, 654.

Mortality.

Carroll, 108; Foster, 194; Moffat, 406; Sell, 572; Wallis, 661.

VARIATION AND AETIOLOGY. 5823

Variation.

Anfrie, 11; Berlioz, 59; Blagg, 67; Braun, 86; Corainville, 138; Kollibay, 331; Martorelli, 378; Pearl, 470; Poliakow, 486; Sclater, 567.

Teratology.

Anfrie, 11; Jungersen, 311; Kollibay, 331; Martorelli, 378.

Hybrids.

Blaauw, 63; Fulljames, 198; Ghigi, 207; Tschermak, 652.

Heredity and Evolution.

GENETICS:—Ghigi, 207; Harris and others, 237, 238; Pearl, 469, 470; Tjebbes, 645; Tschermak, 652.

SECONDARY SEXUAL CHARACTERS, Bateson & Haig, 48; Wetmore, 672.

INFLUENCE OF EXTERNAL CONDITIONS, Barnard, 45; Bunyard, 98.

Fossil and Extinct Birds.

GENERAL:—Arldt, 18; Andrews, 10; Newton, 420; Paris, 465; Ritchie, 519; Shufeldt, 578, 579; Troxell, 651; Wetmore, 669.

SPECIAL FORMS DESCRIBED:—*Alca impennis*, Christiani, 125; *Diatryma*, Matthew & Granger, 380; *Didus*, Oudemans, 455, 457; *Leguatia*, Oudemans, 456; *Archaeopteryx*, Petronievics & Woodward, 479.

GEOGRAPHY. 5827

General.

Alexander, 2; Arldt, 18; Deschiens, 154; Grinnell, 217; Schweppenburg, 562.

PALAEARCTIC REGION.

General: Simes, 581.

British Isles.

BRITISH ISLES, Bunyard, 98; Nichols & Parkin, 423; Thomas & Collett, 641.

MIDDLESEX, Clarke, 131; Stubbs, 622.

HERTFORDSHIRE, Bickerton, 61; Foster, 192;

SUSSEX, Nichols, 422; Nichols & Parkin, 423.

KENT, Alexander, 4.

OXFORDSHIRE, Sclater, 569.

SOMERSETSHIRE, Andrews, 10; Sclater, 569; Wiglesworth, 691.

DORSETSHIRE, Curtis, 146.

CORNWALL, Wallis, 661.

ESSEX: Anon, 12; Owen, 459.

SUFFOLK: Nichols, 425.

NORFOLK: Gurney, 224; Smalley, 587.

STAFFORDSHIRE: Masefield, 379.

SHROPSHIRE: Forrest, 190.

CHESHIRE: Coward, 141.

LANCASHIRE: Coward, 141; Robinson, 525, 527.

YORKSHIRE: Greaves, 215; Milburn, 401.

WESTMORELAND: Robinson, 524, 526.

CUMBERLAND: Bolam, 69, 70.

NORTHUMBERLAND: Chapman, 115.

GLAMORGANSHIRE: Proger & Paterson, 490.

SCOTLAND: Rintoul & Baxter, 516, 517.

WEST LOTHIAN: Adam, 1.

KIRKCUDBRIGHTSHIRE: Begg, 52, 53.

FIFE: Ritchie, 519.

PERTHSHIRE: Coates, 134.

INVERNESS-SHIRE: Clarke, 132.

SUTHERLAND: Newton, 420.

LEWIS: Mackenzie, 373.

SHETLAND: Selous, 574.

IRELAND: Carroll, 108, 109; Douglas, 171; Patten, 467.

Co. DOWN: Foster, 194.

Co. WEXFORD: Moffat, 406.

Co. MAYO: Ruttledge, 538.

France.

General: Bacmeister, 29; Gengler, 206; Hartert, 248; Petit, 478; Schuster, 557.

AISNE: Franz, 196.

LOIRE ET CHER: Coursimault, 140.

MARNE; Schuster, 558.

MEURTH ET MOSELLE: Plocq, 485.

MEUSE: Heyder, 281; Schuster, 556.

SOMME: Kennedy, 320.

Germany.

GENERAL: Hagan, 280; Hildebrandt, 282.

WESTFALEN: Hennemann, 267, 268, 269; Koch, 329; Reichling, 500, 501.

HESSE-NASSAU: Stechow, 604.

THURINGISCHE STAATEN: Hildebrandt, 283.

KÖNIGR. SACHSEN: Hoffmann, 287; Schlegel, 554.

LUBECK: Hagen, 228.

BRANDENBURG: Auel, 25; Helfer, 262; Schalow, 547.

POMMERN: Koske, 334, 335.

POSEN: Hammling, 232; Kayser, 315, 316.

SCHLESIEN: Bahrmann, 30; Kayser, 313, 314; Natorp, 417; Pax, 468.

WESTPREUSSEN: Braun, 87; Dobbrick, 162; Ibarth, 302.

OSTPREUSSEN: Thienemann, 638; Tischler, 644.

BAYERN:–Gebhardt, 202; Gengler, 204; Hoffmann, 286; Laubmann, 344; Ries, 513; Stadler, 599.

HELGOLAND:–Krüss, 337, 338.

Austria-Hungary.

GENERAL:–Tschusi, 653.

OBER-OESTERREICH:–Plaz, 483; Watzinger, 662, 663.

NIEDER-OESTERREICH:–Mintus, 405.

STEIERMARK:–Noggler, 428.

TIROL:–Michel, 400; Wettstein, 573.

DALMATIEN:–Schiebel, 552, 553.

CROATIA AND SLAVIONIA:–Rossler, 528; Schiebel, 551.

BOHEMIA:–Kayser, 313; Lucanus, 364.

GALICIA:–Sitowski, 582.

HUNGARY:–Hegyfoky, 259; Schenk, 548, 550.

Switzerland.

SWITZERLAND:–Bretscher, 88; Fischer-Sigwart, 187; Hess, 276; Knopfli, 327; Studer & Burg, 623.

Belgium.

Gengler, 206.

Holland.

Burg, 99–; Ekama, 175; Meyere, 399; Oort, 453, 454; Pellinkhof, 473; Pelt-Lechner, 474, Snouckaert, 591, 594, 595; Swaen, 624; Thiebout, 637.

Scandinavia.

DENMARK:–Arctander, 17; Hørring, 294; Konradsen, 333; Pedersen 472; Saxtorph, 544; Skovgaard, 585, Tänning, 630.

NORWAY:–Christiani, 125.

SWEDEN:–Granvik, 214; Lakjer, 343; Rendahl, 502

ICELAND:–Noble, 427; Saemundsson, 540.

Russia.

GENERAL:–Lucanus, 363.

FINLAND:–Merikallio, 397.

KURLAND:–Rüdiger, 535.

GOUV, KOWNO:–Dobbrick, 161; Rüdiger, 535.

POLAND:–Bacmeister, 26; Domaniewski, 167, 168; Stolz, 608.

WOLHYNIA:–Gengler, 205.

SARATOW:–Domaniewski, 167, 168.

GOUV. MINSK :–Zedlitz, 705.

TCHERNO-MORSK (BLACK SEA DISTRICT) :–Koudeshev, 336.

NOVA ZEMBLA :–Haase, 227; Schalow, 546.

Iberian Peninsula.

PORTUGAL :–Reichenow, 494.

Italy.

Alexander, 2, 3, ; Hartert, 248.

Balkan Peninsula.

SERBIA :–Baemeister, 28.

MACEDONIA :–Clarke, 129; Sladen, 586.

Mediterranean Islands.

BALEARIC IS. :–Jordans, 308.

MALTA :–Despott, 155, 156, 157.

CYPRUS :–Hartert, 248.

North Africa.

MAROCCO :–Hartert, 244, 248.

ALGERIA :–Schweppenburg, 559, 560, 562.

EGYPT :–Boyd, 77; Hartert, 252; Koenig, 330; Nicoll, 426.

Western Asia.

ASIA MINOR :–McGregor, 372.

PALESTINE :–Schmitz, 555.

PERSIA :–Hartert, 247; Ludlow, 365.

Russian Asia.

TURKESTAN :–Hartert, 245, 248; Kollibay, 332; Sarudny, 543.

TURGAI PROV :–Karamsin, 312.

GOUV. YENESEISK :–Haviland, 258.

USSURILAND :–Buturlin, 105.

Eastern Palaearctic Asia.

COREA :–Hartert, 255; Kennedy, 341.

JAPAN :–Jourdain, 310; Laubmann, 346; Uchida, 656.

NORTHERN CHINA :–Reichenow, 496.

Atlantic Islands.

CAPE VERDE, AZORES, MADEIRA : Hartert, 243, 250.

ETHIOPIAN REGION.

West Africa.

SENEGAL :–Millet-Horsin, 403, 404; Neumann, 418.

IVORY COAST :–Bouet et Millet-Horsin, 72.

TOGOLAND :–Reichenow, 496.

CAMEROON : O. Grant, 451.

BELGIAN CONGO : Lönnberg, 355; Reichenow, 496.

South Africa.

SOUTH WEST AFRICAN PROTECTORATE : Finch-Davies, 186; Roberts, 521, p. 256, 522.

CAPE PROVINCE : Reichenow, 496.

NATAL : King, 323; Roberts, 522.

RHODESIA, TRANSVAAL : Roberts, 521.

Central and East Africa.

PORTUGUESE EAST AFRICA : Reichenow, 496.

GERMAN EAST AFRICA : Reichenow, 496; Roberts, 522.

BRITISH EAST AFRICA : Lönnberg, 356; Loveridge, 357, 358; Mackworth-Praed, 374.

UGANDA : Rothschild, 532; Someren, 596.

North-East Africa and Arabia.

ARABIA : Hartert, 248, 254; Sclater, 563.

Madagascar and Mascarene Islands.

Hartert, 244; Killerman, 322.

INDIAN REGION.

Indian Empire and Ceylon.

INDIA : Baker, 38, 39; Perreau, 475.

NORTH-WEST FRONTIER PROVINCE : Witherby, 699, 700.

PUNJAB: Baker, 40; Donald, 170; Waite, 658, 659; Hughes, 300.

UNITED PROVINCES: Hartert, 248.

BOMBAY PRES.: Ferrar, 185.

CENTRAL PROVINCE: Baker, 41.

BURMA: Baker, 41; Hopwood & Mackenzie, 293.

Malaysia.

MALAY PENINSULA: Gyldenstolpe, 225; Hartert, 245; Robinson, 523.

SUMATRA: Hearn, 280; Oberholser, 440.

BORNEO: Hartert, 246; Rothschild, 531.

CELEBES: Hartert, 246.

ISLANDS OF THE JAVA SEA: Oberholser, 447, 449.

ANAMBA ISLAND SOUTH CHINA SEA AND NICOBAR ISLANDS: Oberholser, 438.

Indo-China and Southern China.

SIAM: Baker, 40; Forty, 191; Kloss, 326; Williamson, 693.

FRENCH INDO-CHINA: Hartert, 244; Kuroda, 339.

YUNNAN; Baker, 40, 41.

SOUTH CHINA: Hartert, 241; La Touche, 342.

FORMOSA: Kuroda, 340.

AUSTRALIAN REGION.

New Guinea and dependent Islands.

NEW GUINEA: Neumann, 419; Reichenow, 498; Rothschild, 529.

NEW GUINEA AND ADJACENT ISLANDS: Rothschild & Hartert, 533.

SOLOMON IS.: Rothschild & Hartert, 534.

Australian Commonwealth.

AUSTRALIA, GENERAL: Barnard, 45; Evans, 178; Mathews, 381, 386, 388, 389.

WESTERN AUSTRALIA: Alexander, 5, 6; Carter, 110; Mathews, 382, 384.

SOUTH AUSTRALIA: Ashby, 22, 23; Lowe, 359; Morgan, 409; S. A. White, 679, 680, 682, 683, 684, 686, 687; Zietz, 706, 707.

NORTHERN TERRITORY: Mathews, 382; H. L. White, 674, 675, 676, 677.

TASMANIA: Ashby, 20, 21; Dove, 172; Legge, 349; Mathews, 383.

VICTORIA: Kershaw, 321; Littlejohns, 353; Wilson, 694.

QUEENSLAND: Campbell & Barnard, 107; Chisholm, 123; Macgillivray, 371; Mathews, 383; H. L. White, 675.

New Zealand & Pacific Islands.

NEW ZEALAND: Andersen, 8; Wetmore, 670.

NEW CALEDONIA: Brasil, 80.

MARIANNE IS.: Wetmore, 671.

GUAM: Hartert, 247.

HAWAIIAN IS.: Bryan, 95.

NEOTROPICAL REGION.

South America.

FALKLAND IS. AND S. GEORGIA: Beck, 50; Brooks, 93.

ARGENTINE: Boyle, 78; Chubb, 128; Dabbene, 147, 148, 149, 150; Doello-Jourado, 163; Hartert & Goodson, 256; Miller, 402; Outes, 458.

PARAGUAY: Berlepsch, 58.

CHILE: Dabbene, 147, 148; Murphy, 415.

BOLIVIA: Chubb, 127; Hartert & Goodson, 256; Hellmayr, 263; Miller, 402; Todd, 646.

PERU: Chubb, 126, 127, 128; Hartert & Goodson, 256, 257; Hellmayr, 263, 265;

COLOMBIA: Chapman, 118; Chubb, 126; Hartert & Goodson, 257; Stone, 612; Todd, 646, 647; Sclater, 565.

BRAZIL: Chubb, 128; Cory, 139; Hartert & Goodson, 257; Hellmayr, 265; Menegaux, 394.

ECUADOR:–Chubb, 126, 128; Hartert, & Goodson, 256; Reichenow, 495.

DUTCH GUIANA:–Hartert & Goodson, 256.

BRITISH GUIANA :–Beebe, 51; Chubb, 128; Dawson, 153.

VENEZUELA :–Chubb, 128; Hartert, 240; Hartert & Goodson, 256, 257; Hellmayr, 263; Todd, 647.

TRINIDAD AND LEEWARD IS. :–Hartert & Goodson, 256, 257.

Central America.

SALVADOR :–Howell, 298.

COSTA RICA :–Hartert & Goodson, 256.

West Indies.

HAITI AND SANTO DOMINGO : Bartsch, 47; Chapman, 119; Peters, 476; Richmond, 511.

PORTO RICO :–Peters, 477; Wetmore, 667.

BAHAMAS:–Riley, 514.

ALACRAN REEF, G. OF MEXICO : Kennedy, 319.

NEARCTIC REGION
(including Mexico).

Mexico.

Hartert & Goodson, 256; Murphy, 414; Oberholser, 436, 441; Shufeldt, 577.

Western United States.

CALIFORNIA :–Bailey, 37; Brown, 94; Clay, 153; Grinnell, 218, 219, 220; Grinnell & Storer, 221; Hanna, 235; Hansen & Squires, 236; Howell, 299; Oberholser, 431; Swarth, 625, 626, 627; Swarth & Bryant, 628.

ARIZONA :–Lincoln, 351.

UTAH :–Wetmore, 666.

COLORADO :–Bergtold, 57; Bradbury, 79; Grinnell, 219; Lincoln, 350; Lowe, 360; Oberholser, 444.

OREGON:–Bailey, 36; Shelton, 580; Walker, 660.

IDAHO :–Rust, 537.

WYOMING :–Cary, 111; Skinner, 583, 584.

WASHINGTON :–Bowles, 74, 75, 76; Dice, 158; Oberholser, 446; Rathburn, 493.

Middle United States.

TEXAS :–Sell, 572; Smith, 588; Taylor, 634.

ALABAMA :–Gelsan & Holt, 212.

IOWA :–Bailey, 35; Gabrielson, 201; Spurrell, 597.

WISCONSIN :–Stoddard, 606.

INDIANA :–Evermann, 179; Stoddard, 607.

Eastern United States.

FLORIDA :–Oberholser, 431.

SOUTH CAROLINA :–Wayne, 664.

NORTH CAROLINA :–Brimley, 89, 90.

VIRGINIA :–Oberholser, 450.

DISTRICT OF COLUMBIA :–Hollister, 289; McAtee, Preeble & Wetmore, 370; Oberholser, 445, 450.

MARYLAND :–Hollister, 289; Oberholser, 450.

PENNSYLVANIA :–Burleigh, 101; Fowler, 195; MacReynolds, 377; Stone, 611.

NEW JERSEY :–Oberholser, 431; Potter, 489; Scoville, 571; Stone, 611.

NEW YORK :–Bishop & Wright, 62; Burtch, 103; Nichols, Murphy Griscom, 424.

CONNECTICUT :–Gabrielson, 200; Henninger, 273.

MASSACHUSETTS :–Faxon, 182; Townsend, 648; Wright, 702, 703.

Canada.

GENERAL :–Macoun & Macoun, 376.

NEW BRUNSWICK :–Philipp & Bowdish, 481.

QUEBEC :–Cooper, 137; Merriam, 398; Mousley, 410; Terrill, 635; Townsend, 649.

ONTARIO :–Beauprè, 49; Cooper, 137; Lloyd, 354; Macnamara, 375.

MANITOBA :–Criddle, 144, 145.

BRITISH COLUMBIA :–Brooks, 91; Grinnell, 219; Taverner, 631, 632.

MACKENZIE :–Dixon, 159.

ARCTIC CANADA :–Anderson, 9.

Alaska.

ALASKA :-**Dixon, 159 ; Gianini, 208 ; Hanna, 234 ; Hersey, 274 ; Oberholser, 431 ; Riley, 515 ; Willett, 692.**

Greenland.

Helms & Schiøler, 266 ; Porsild, 488.

THE OCEANS.

NORTH SEA & N. ATLANTIC :-**Kennedy, 318.**

III.—SYSTEMATIC.

The arrangement of Sharpe's "Hand-list of Birds" is here used ; where generic names differ, the name in the Hand-list is prefixed in square brackets.

Full references are given only in the case of new genera and species. In other cases the numeral in Clarendon refers to the List of Titles, where the full reference will be found.

ORDER ARCHÆOPTERYGES.

†*Archaeopteryx*, on the pectoral and pelvic arches, PETRONIEVICS & WOODWARD **479.**

ORDER APTERYGIFORMES.

Apteryx mantelli, history of introduction into Europe, RENSHAW **504.**

ORDER TINAMIFORMES.

On the nesting and other habits of the Guianian Tinamous and on the structure of the tarsus with figures, BEEBE **51**, p. 253.

Tinamus major, zonal distribution of races enumerated, CHAPMAN **118** p. 187.

Crypturus cinnamomeus spencei, Venezuela p. 29, *C. obsoletus punensis* Peru p. 30 **subspp. n.**, CHUBB Bull. B.O.C. **38**.—*C. soui* zonal distribution of races, CHAPMAN **118**, p. 191.

Microcrypturus **nom. n.** for *Crypturellus* preoccupied, CHUBB Bull. B.O.C. **38** p. 30.

Rhynchotus rufescens alleni **subsp. n.** Central Brazil, CHUBB Bull. B.O.C. **38** p. 30.

Nothoprocta pentlandii simonsi **subsp. n.** N. Peru, CHUBB Bull. B.O.C. **38** p. 30.

Nothura darwini mendozensis **subsp. n.** Argentina, CHUBB Bull. B.O.C. **38** p. 31.

Calopezus elegans morenoi **subsp. n.** Patagonia, CHUBB Bull. B. O. C. **38** p. 31.

ORDER GALLIFORMES.

Megapodius duperryii subspecies listed, OBERHOLSER **449** p. 189.

Leipoa ocellata, incubation period and habits, BELLCHAMBERS **54.**

Megacephalum maleo avicult. and other notes, RENSHAW **503.**

Penelope cristata and *P. perspicax* distinctive characters, CHAPMAN **118** p. 195.—*P. brooki* **sp. n.** E. Ecuador, CHUBB Bull. B. O. C. **38** p. 5.

Chamaepetes fagani **sp. n.** W. Ecuador, CHUBB Bull. B. O. C. **38** p. 4.

Lyrurus t. britannicus a cinnamon-coloured variation, WHYMPER **690.**

Tetrao parvirostris note on synonymy, HARTERT **248** p. 292.

Pediœcetes phasianellus jamesi **subsp. n.** Colorado, LINCOLN Proc. Biol. Soc. **30** p. 84.

[*Caccabis*] *Alectoris* must take the place of *Caccabis* as the generic name of the Red-legs p. 276, *A. barbara barbara* (Bonn.) must replace *Caccabis petrosa* as the name of the Barbary Partridge p. 275, *A. graeca cypriotes* **subsp. n.** Cyprus p. 278, *A. g. falki* **subsp. n.** Russian Turkestan p. 280, HARTERT Nov. Zool. **24.**

Ammoperdix heyi and *A griseogularis* on subspecific forms, *A. heyi intermedia* **subsp. n.** S. Arabia, HARTERT Nov. Zool **24** p. 282.

Francolinus pondicerianus, 3 subspecies recognised, *F. p. interpositus* **subsp. n.** northern India p. 288.—*F. francolinus* type locality Cyprus p. 287, subspecies reviewed p. 288, *F. bicalcaratus* subspecies revised, *F. b. ayesha* **subsp. n.** Morocco p. 291, HARTERT Nov. Zool. **24.**—*F. lathami*

schubotzi description, habits, coloured plate, SOMEREN **596.**—*F. gariepensis jugularis* and *F. g. pallidior*, note on examples from Ovamboland, SCLATER **568.**—*F. adolfii-frederici* Reichw. = *F. mulemae* O.-Grant, LÖNNBERG **356** p. 2.—*F. hartlaubi* in Damaraland new to S. Africa, ROBERTS **521** p. 256.

Perdix perdix review of the subspecies, *P. p. italica* Italy p. 283, *P. p. armoricana* western France p. 284 **subspp. n.**, HARTERT Nov. Zool. **24.**

Melanoperdix nigra borneensis **subsp. n.** Borneo, ROTHSCHILD Bull. B. O. C. **38** p. 3.

Coturnix coturnix review of the races, p. 420, *C. c. inopinata* Cape Verde Is., p. 422, *C. c. confisa* Madeira p. 423, *C. c. conturbans* Azores p. 423 **subspp. n.**, HARTERT Nov. Zool. **24.**

Lophophorus impejanus and *L. refulgens* on their status and varieties, ROTHSCHILD **530.**

Gennaeus Indian species reviewed, *G. albocristatus* figured in colour, BAKER **38.**

Phasianus, example with abnormal sex-characters, BATESON & HAIG **48.**—*P. colchicus*, taxonomic notes and list of subspecies, HARTERT **253.**

Calophasis mikado addt. description and food habits, KURODA **340** p. 263.

[*Chrysolophus*] *Thaumalea picta* and *T. obscura* hybrids and genetics discussed, TJEBBES **645.**

Gallus, Indian species reviewed, *G. sonnerati* figured in colour, BAKER **38.**—*G. sonnerati* crossed with domestic fowl, BLAAUW **63**; GHIGI **207.**—*G. varius* (Shaw), on Bawean I. type locality fixed on Java, OBERHOLSER **447** p. 187.

Pavo; on hybrid Peacocks, BLAAUW **63.**

Numida papillosa damarensis **subsp. n.** S.W. Africa Protect., ROBERTS Ann. Trans. Mus. **6** p. 2.—*N. p. ptilorhyncha* in Yemen, SCLATER **563** p. 185.

Guttera edouardi symonsi **subsp. n.** Karkloof Natal, ROBERTS Ann. Trans. Mus. **6** p. 3.

Lophortyx catalinensis Grinnell, a recognizable race of *L. californica*, OBERHOLSER **431** p. 194.

Eupsychortyx cristatus littoralis **subsp. n.** Santa Marta, *E. decoratus* **sp. n.** Bolivar, Colombia, TODD Proc. Biol. Soc. Wash. **30** p. 6.

Colinus virginianus texanus economics habits and conservation, TAYLOR **634.**—*C. pectoralis* nesting in captivity, BAILY **33.**—*C. cristatus* Colombian subspecies discussed, CHAPMAN **118** p. 198.

Odontophorus parambae zonal range and specific characters, CHAPMAN **118** p. 200.

ORDER TURNICIFORMES.

Marianornis **gen. n.** for *Ortygodes varia* (Lath.), MATHEWS Austr. Av. Rec. **3** p. 128.

ORDER PTEROCLIDIFORMES.

Pterocles orientalis (L.) is the correct name for the Black-billed Sand-grouse *P. arenarius* auct., HARTERT **248** p. 287.

ORDER COLUMBIFORMES.

Sphenocercus sororius La Touche = *S. sieboldi* Temm., LA TOUCHE **342** p. 561.

Vinago calva in Damaraland new to S. Afr., ROBERTS **521** p. 256.

Butreron capellei passorhina **subsp. n.** Pulo Mata Siri, Java sea, OBERHOLSER P.U.S. Nat. Mus. **54** p. 192.

[*Osmotreron*] *Dendrophassa vernans adina* **subsp. n.** Anamba Is., OBERHOLSER Bull. U.S. N. Mus. No. **98** p. 20.

[*Spilotreron*] *Haemataena melanocephala massoptera* **subsp. n.** Pulo Mata Siri Java sea, OBERHOLSER P.U.S. Nat. Mus. **54** p. 191.

[*Carpophaga*] *Muscadivores aeneus polius* **subsp. n.** Anamba Is., OBERHOLSER Bull. U.S.N. Mus. No. **98** p. 18.—*M. rosaceus zamydrus* **subsp. n.** Solombo Besar I. Java Sea, OBERHOLSER P.U.S. Nat. Mus. **54** p. 179.

Lopholaemus antarcticus egg from N. Queensl. described, H. L. WHITE **675** p. 163.

Columba domestica pseudohermaphroditism in male pigeons, JUNGERSEN **311**.—*C. palumbus* differences between British and Continental birds, WITHERBY **696**.—*C. plumbea wallacei* Para, Brazil, *C. p. andicola* Bolivia **subspp. n.**, CHUBB Bull. B. O. C. **38** p. 32.—*C. subvinacea* taxonomy and distribution of Colombian races, CHAPMAN **118** p. 204.—*C. anolaimae* **sp. n.** Colombia, CHUBB Bull. B. O. C. **38** p. 17.—*C. ogilvie-granti* **sp. n.** N. Peru, CHUBB Bull. B. O. C. **38** p. 5.—*C. albinucha* sexual differences noticed, LÖNNBERG **355** p. 10.

Turturoena sharpei note on examples from B.E.A., LÖNNBERG **356**.

Ectopistes migratorius in New York State in 1909 ?, BISHOP & WRIGHT, **62**.

Zenaida ruficauda antioquiae **subsp. n.** Antioquia, Colombia, CHAPMAN Bull. Amer. Mus. **36** p. 207.

Scardafella squamata cearae **subsp. n.** Ceara Brazil, CORY Chicago Field Mus. Publ. Zool. **12** p. 6.

Gymnopelia ceciliae (Less. 1845) has priority over *G. anais* (Less. 1847), *G. c. gymnops* **subsp. n.** CHUBB Bull. B. O. C. **38** p. 18.

Chaemepelia talpacoti nest and eggs described with photo, BEEBE **51** p. 213.

Metriopelia melanoptera saturatior **subsp. n.** Ecuador, CHUBB Bull. B. O. C. **38** p. 32.

[*Chalcopelia*] *Turtur afer* revision of the blue-spotted forms, *T. a. sclateri* **subsp. n.** Uganda and W. Africa, ROTHSCHILD Bull. B. O. C. **38** p. 26.—*C. afra kilimensis* not a good subspecies, LÖNNBERG **355** p. 11.

Leptoptila verreauxi macconnelli **subsp. n.** Bt. Guiana, CHUBB Bull. B. O. C. **38** p. 32.—*L. plumbeiceps* in Colombia, CHAPMAN **118** p. 212.—*L. ochroptera approximans* **subsp. n.** Ceara Brazil, CORY Chicago Field Mus. Publ. Zool. **12** p. 7.—*L. intermedia* **sp. n.** Peru, CHUBB Bull, B. O. C. **38** p. 17.

Geotrygon montana nest and eggs described, BEEBE **51** p. 213.—*G. bourcieri baeza* **subsp. n.** Ecuador, CHUBB Bull, B. O. C. **38** p. 33.—*Oreopeleia bourcieri* distribution in Colombia, CHAPMAN **118** p. 214.—*O. leucometopius* **sp. n.** Prov. Azua, S. Domingo W. I., CHAPMAN Bull. Amer. Mus. **37** p. 327.

†*Raphus cucullatus*, †*Aptornis solitarius*, †*Pezophaps solitarius*, Dodo studies, OUDEMANS **455** **457**.

ORDER OPISTHOCOMIFORMES.

Opisthocomus cristatus habits and haunts especially of the young bird, BEEBE **51** p. 155.

ORDER RALLIFORMES.

†*Rallus adelus* **nom. n.** for *R. intermedius* M.-Edw. preoccupied, OBERHOLSER Proc. Biol. Soc. Wash. **30** p. 76.

[*Limnopardalis*] *Pardirallus rityrhynchus simonsi* **subsp. n.** Peru, CHUBB Bull. B. O. C. **38** p. 33.

Eulabeornis castaneiventer, eggs from N. Terr. Australia described, H. L. WHITE **675** p. 164.

Porzana albicollis nest and eggs described with photo, BEEBE **51** p. 215.—*P. flaviventris hendersoni* **subsp. n.** Haiti, BARTSCH Proc. Biol. Soc. **30** p. 131.

[*Poliolimnas*] *Porzana cinerea brevipes* on the eggs, JOURDAIN **309**.

Creciscus viridis nest and eggs described with photo, BEEBE **51** p. 216.

[*Limnobaenus*] *Porzana fusca* a review of the subspecies, p. 271, *P. f. bakeri* **subsp. n.** Assam p. 272, HARTERT Nov. Zool. **24**.

Neocrex erythrops olivascens **subsp. n.** Venezuela, CHUBB Bull, B. O. C. **38** p. 33.

Gallinula chloropus a list of recognised subspecies p. 267, *G. c. guami* Guam I. Western Pacific p. 268, HARTERT Nov. Zool. **24**.—*G. galeata* nesting habits in New York State, BURTCH **103**.

Porphyrio madagascariensis (Lath.) is the correct name of the African Purple Coot p. 265 ; *P. poliocephalus caspius* **subsp. n.** Caspian area p. 266 and list of Palaearctic species, HARTERT Nov. Zool. **24**.

Fulica atra, habits in Scotland, BOASE 68; migrations, HESS **277**.—*F. stenoleuca* status discussed, HAGEN **230**; LAUBMANN **347**.—*F. americana* an abnormal egg, WETMORE **668**.

†*Leguatia gigantea* history, classification and other notes, OUDEMANS **456**.

Podica notes on the species and subspecies, MACKWORTH-PRAED **374** p. 414.

ORDER PODICIPEDIFORMES.

[*Proctopus*] *Colymbus nigricollis* in Heligoland, KRÜSS **338**.

[*Lophaethyia*] *Podiceps cristatus* courting and other habits, SELOUS **573**.

ORDER COLYMBIFORMES.

[*Colymbus*] *Gavia arctica* status in N. America, HERSEY **275**.—*Urinator immer* on the date of the earliest record in West Prussia, DOBBRICK **162**.

ORDER SPHENISCIFORMES.

Aptenodytes patagonica, moult in captivity, EWART & MACKENZIE **180**.

Pygoscelis papua field notes and nesting habits with photos on the Falkland Is., BROOKS **93** p. 136.

Eudyptes, Australian species discussed MATHEWS **389** p. 184.

Spheniscus magellanicus on the Patagonian coast photographed, DOELLO-JURADO **163**.

ORDER PROCELLARIIFORMES.

Procellariiformes of Western Australia, ALEXANDER **5**.

Oceanodroma leucorhoa review of subspecies, OBERHOLSER **448**.

Bannermania and *Cymochorea* not generically separable from *Oceanodroma*, OBERHOLSER **431** p. 465.

Puffinus taxonomic notes on N. American species and recently separated genera and subgenera, OBERHOLSER **433**.—*P. carneipes* occurrence in S. Australian waters, WHITE **683**.—*P. bermudae* occurrence in N. Atlantic, BROOKS **92**.—*Thyellodroma pacifica chlororhyncha* nesting habits, CARTER **110** p. 573.

[*Oestrelata*] *Pterodroma macroptera* first record for S. Australian coasts, ZIETZ **707**.

Halobaena murphyi **sp. n.** South Georgia, BROOKS Bull. Mus. Comp. Zool. **61** p. 146.

Diomedea chionoptera ringed at Kerguelen captured near Cape Horn, MENEGAUX **395**.

Rhottonia **subg. n.** for type *Diomedea* (*Rhottonia*) *sanfordi* **sp. n.** coast of Chile, MURPHY Bull. Amer. Mus. N. H. **37** p. 861.

ORDER ALCIFORMES.

†*Chenalopex* not *Plautus* must be the accepted name for the Great Auk, MATHEWS & IREDALE **390** p. 118.—*Alca impennis* bones found near Vardo, Norway, CHRISTIANI **125**.

Uria troille troille and *U. t. californica*, on the eggs, JOURDAIN **309**.

[*Cepphus*] *Uria mandtii* note on this so-called variation, JACOBI **305**.

[*Pseuduria*] *Cepphus snowi* record in Alaska doubtful, OBERHOLSER **431** p. 191.

Aethia generic name discussed, STONE **610**.

Fratercula arctica grabae a discussion as to its validity, SCLATER and others **570**.—*F. a. naumanni* type specimen and type locality indicated, NORTON **429**.

ORDER LARIFORMES.

Hydrochelidon leucoptera visitation to Western Australia, ALEXANDER **6**.

[*Gelochelidon*] *Sterna anglica* breeding habits in the Punjab, WAITE **659**.

[*Hydroprogne*] *Sterna caspia* first record for Washington State, BOWLES **76**.

Sterna dougalli on Lake Michigan, STODDARD **607**.—*S. s. sandvicensis* and *S. d. dougallii* breeding in Ireland, CARROLL **109**.—*S. fuliginosa* and *S. sandvicensis acuflavida* breeding in Gulf of Mexico, KENNEDY **319**.—*S. melanauchen provida* **subsp. n.** Providence Bank between Seychelles and Madagascar, OBERHOLSER Bull. U.S. Nat. Mus. no. **98** p. 16.

Larus ridibundus in London, STUBBS **622**.—*L. argentatus thayeri* status discussed, DWIGHT **174**.—†*L. vero* **sp. n.** Pleistocene of Florida, SHUFELDT **578** p. 40.

[*Megalestris*] *Catharacta skua* on a melanistic example found dead in Oxfordshire, SCLATER **569**.

Stercorarius parasiticus its phases in S. Australian waters, WHITE **682**.—*S. parasiticus visitori* **subsp. n.** New S. Wales, MATHEWS Austr. Av. Rec. **3** p. 73.—*Coprotheres pomarinus nutcheri* **subsp. n.** New S. Wales, MATHEWS Austr. Av. Rec. **3** p. 72.

ORDER CHARADRIIFORMES.

Moult of British Waders, JACKSON **304**.

Vanellus vanellus, a blue egg, STUBBS **620**.

Charadrius dominicus, in Ontario, BEAUPRE **49**.

[*Ochthodromus*] *Pagolia wilsonia rufinucha* subspecific characters and taxonomy, PETERS **476** p. 405.

Eudromias morinellus breeding habits in Siberia, HAVILAND **258**; in Scotland, MEARES **391**.

[*Ægialeus*] *Charadrius semipalmatus* in Sussex, first record for Bt. Isles, PARKIN **423**.

[*Helodromas*] *Totanus ochropus* supposed breeding in England, ROBINSON **524 526**.

[*Tringoides*] *Tringa hypoleuca* abnormal clutches, BAKER & JOURDAIN **42**.—*Actitis hypoleuca aurita* recognised by Mathews, cannot be maintained, OBERHOLSER **438** p. 15.

Tryngites subruficollis first record for Washington State, BOWLES **76**.

[*Heteropygia*] *Pisobia bairdi* field and breeding notes in Arctic America, DIXON **159**.

Gallinago gallinago, breeding and drumming habits, STUBBS **621**.—*G. gallinago* and *G. stenura*, weights in S. India, STONEY **613**.

Scolopax rusticola migrations in Ireand, DOUGLAS **171**; ringed in Ireland recovered in Shetland, CLARKE **130**; nesting in Denmark, KONRADSEN **333**; migration dates, etc., etc., in Sweden, RENDAHL **502**.—*S. rusticola mira* from Amami, Loo Choo Is. figured, HARTERT **251**.

Phalaropus lobatus at 7,600 ft. in Yemen, SCLATER **563** p. 182.

Jacana spinosa development, pterylosis wing structure, etc., etc., HARTLEY **51** p. 293.—*J. nigra*, type locality "Brazil" incorrect, CHAPMAN **118** p. 226.

[*Tetrax*] *Otis tetrax* in Croatia, SCHIEBEL **551**.—*O. t. tetrax* and *O. t. orientalis* distinguished with distribution notes, HARTERT **239** p. 212.

Houbara macqueeni occurrence in Switzerland, HESS **276**.

ORDER GRUIFORMES.

Grus vipio, *G. monachus* and *G. japonensis* migrations in Japan, UCHIDA, **656**.

Mesooenas Reichenb. must replace *Mesites* Geoffr. preoccupied, BRASIL **82**.

Psophia crepitans habits of old and young birds the latter figured in colour and photographed, BEEBE **51** p. 247.

Chunga burmeisteri field notes in Argentine, BOYLE **78**.

†*Diatryma steini* **sp. n.** Lower Eocene of Wyoming, MATTHEW & GRANGER Bull. Amer. Mus. **37** p. 322.

ORDER ARDEIFORMES.

Ibis molucca, field notes, LE SOUËF **348**.

Carphibis spinicollis field notes, LE SOUËF **348**.

[*Comatibis*] *Geronticus eremita* former distribution in Switzerland; the Waldrapp of Gesner, STROHL **617**.

Theristicus melanops field and avicultural notes, BLAAUW **64**.

Ciconia alba in Denmark, TÅNING **630**.

Xenorhynchus asiaticus in Malay Peninsula, ROBINSON **523** p. 141.

Ardea cinerea firasa **subsp. n.** Madagascar, HARTERT Bull. B. O. C. **38** p. 6. —*A. herodias wardi* and *H. h. wurdemanni* relationship and taxonomy, BARTSCH **46**.—†*A. sellardsi* **sp. n.** Pleistocene of Florida, SHUFELDT **578** p. 38.

Garzetta nigripes eggs from N. Terr. Australia described, H. L. WHITE **675** p. 162.

Tigrisoma salmoni taxonomic note, CHAPMAN **118** p. 231.

Ardeola i. ibis in Norfolk 2nd record for British Is., SMALLEY **587**.

[*Ardetta*] *Ixobrychus exilis* unusual nesting site in New Jersey, POTTER **489**. —*I. exilis bogotensis* on the Bogota savanna, CHAPMAN **118** p. 231.

ORDER PALAMEDEIFORMES.

Chauna torquata (Oken) antedates *C. salvadorii* Chubb & Brabourne, HELLMAYR **265** p. 200.

ORDER ANSERIFORMES.

Propagation of Wild Duck Foods, MCATEE, **368**.

Moult of the stomach lining in Ducks, MCATEE, **367**.

Coloration of down in adult Ducks, BOWLES **73**.

Euolor **gen. n.** for type *Anas olor* Gm., MATHEWS & IREDALE Austr. Av. Rec. **3** p. 117.

Chenopsis atrata effects of frost and cold, GUNTHER **223**.

Anser albifrons at Malta, DESPOTT **156**.—*A. albifrons* and *A. a. gambeli* both occurring in California in winter with distinctive characters, SWARTH & BRYANT **628**.

Branta bernicla glaucogastra occurrence in Scotland discussed, RINTOUL & BAXTER and others **516**.—*B. leucopsis* supposed breeding in Iceland, NOBLE **427**.—*Bernicla ruficollis* figured in colour with notice, ASTLEY **24**.

Chlöephaga hybrida malvinarum and *C. magellanica* field notes in N. Falklands BROOKS **93** p. 152.—*C. leucoptera* (Gmel.) must replace *C. magellanica* (Gmel.) pre-occupied, OBERHOLSER **442** p. 75.

Dendrocygna viduata record in New Jersey doubtful, OBERHOLSER **431** p. 192.

Pseudotadorna cristata **gen. et sp. n.** Corea, KURODA Tori No. 5 1917 p. 1 i text fig. (cf. Ibis 1918 p. 732).

Anas boscas migratory movements, PONCINS **487**.—*A. rubripes tristis* further critical taxonomic notes, OBERHOLSER **431** p. 192.—*A. sparsa* breeding in captivity, BLAAUW **66**.

Horizonetta **gen. n.** for type *Anas maysanensis*, OBERHOLSER Proc. Biol. Soc. Wash. **30** 1917 p. 119.

Nettion leucophris (Vieillot) must replace *N. torquata* (Vieill.) preoccupied, OBERHOLSER **442** p. 75.

†*Querquedula floridana* **sp. n.** Pleistocene of Florida SHUFELDT **578** p. 36.

[*Aythya*] *Marila nationi* its relations to *Anas erythrophthalma* and the African *Nyroca brunnea* Eyton cleared up, CHAPMAN **118** p. 234.

Tachyeres cinereus question of the flying and non-flying forms in Falkland Is. discussed, BROOKS **93** p. 155; PHILLIPS & BLAAUW **482**.

[*Clangula*] *Nyroca clangula* young male plumage, TISCHLER **642**; *Fuligula clangula* nesting habits, RÜDIGER **536**.

Oidemia americana in Fohkien Prov. China, LA TOUCHE **342** p. 563.

Heniconetta stelleri on the eggs and nest-down, BUNYARD **96**.

Somateria v.- nigra and *S. spectabilis* on the eggs and nest-down, BUNYARD **96**.

Erismatura jamaicensis tracheal air sacs and larynx, secondary sexual characters, WETMORE **672**.

Merganetta columbiana plumage and moult of young, CHAPMAN **118** p. 236.

Lophodytes cucullatus note on nest and egg, BUNYARD **97**.

ORDER PELICANIFORMES.

Phalacrocorax notes on temperature and food habits of Australian species, MORGAN **408**.—*P. carbo carbo* and *P. c. subcormoranus* distinguished as the two European Cormorants, HARTERT

239.—*P. gaimardi* on the Patagonian coast, bird and eggs photographed, DOELLO-JURADO **163.**—*Microcarbo ater* description of young bird, ZIETZ **707.**

Sula dactylatra californica cannot be included in the list of N. American birds, OBERHOLSER **431** p. 467.

Fregata note on nomenclature of N. American races, OBERHOLSER **431** p. 468.

Pelecanus crispus remains found near Glastonbury, ANDREWS **10.**—*P. erythrorhynchos*, field notes in Yellowstone Park, SKINNER **584.**

†*Palaeochenöides* a Steganopode rather than an Anserine bird, WETMORE **669.**

ORDER ACCIPITRIFORMES.

Status of the Accipitrine birds of Lower Austria, MINTUS **405.**

The Raptores of the Punjab, DONALD **170.**

Serpentarius secretarius history of introduction into Europe, RENSHAW **504.**

Vultur monachus habits in captivity, HUGHES **300.**

Neophron percnopterus note on the first recorded British example killed in 1825, SCLATER **569.**

Circus buffoni recorded from Colombia, CHAPMAN **118** p. 240.—*C. pygargus* nesting habits, DOBBRICK **160.**

Astur a. atricapillus invading California, GRINNELL **220.**—*A. tachiro tenebrosus* **subsp. n.** Londiani Bt. E. Afr. LÖNNBERG Ark. Zool. **11** No. 5 p. 2.—*A. sphenurus* recorded from Yemen, SCLATER **563** p. 178.

Accipiter nisus nisus, A. n. melanoschistos, A. affinis, A. virgatus virgatus, A. v. confusus, A. gularis nesting and other habits in India and eggs figured, BAKER **39** p. 350 pl. vii.—*A. cirrocephalus haesitata* **subsp. n.** Cape York, Queensland, MATHEWS Austr. Av. Rec. **3** p. 128.—*A. beniensis* **sp. n.** Beni Belgian Congo, LÖNNBERG Ark. Zool. **10** No. 24 p. 13.—*A. guttifer* **nom. n.** pro *A. guttatus* auct., HELLMAYR München Verhandl. Orn. Ges. **13** p. 200.

Erythrotriorchis radiatus queenslandicus **subsp. n.** Queensland, MATHEWS Austr. Av. Rec. **3** p. 128.

Buteo anceps ruficauda on the name and status of the Steppe Buzzard, DOMANIEWSKI **165.**—*B. borealis* the Antillean subspecies discussed, PETERS **476** p. 399.—*B. platypterus iowensis* **subsp. n.** Iowa, U.S.A., BAILEY Auk **34** p. 73.

Rupornis magnirostris geographical and individual variation of Colombian forms, CHAPMAN **118** p. 243.

Gypaëtus barbatus recorded occurrences in N. Austrian Alps, TSCHUSI **653**; breeding habits in captivity, KLEIN **324.**—*G. barbatus grandis* on two Swiss examples, HESSE **278**; in Yemen, SCLATER **563** p. 178.

Aquila chrysaetos found in the N. Riesengebirge borders of Silesia and Bohemia, KAYSER **313.**—*A. pomarina pomarina* in Bt. E. Africa first record so far south, MACKWORTH-PRAED **374** p. 407.

[*Eutolmaëtus*] *Hieraaëtus fasciatus* in Yemen, SCLATER **563** p. 179.

Spilornis bassus baweanus **subsp. n.** Bawean I. Java sea OBERHOLSER P. U. S. N. Mus. **52** p. 185.

Gypoictinia melanosterna first occurrence in Tasmania, LEGGE **349.**

Falco peregrinus peregrinator, F. severus, F. subbuteo centralasiae nesting and other habits in India and eggs figured, BAKER **39** p. 224 pl. v.—*F. feldeggi* in Lancashire, ROBINSON **525.**—*F. s. subbuteo* breeding habits in England, MEARES **392.**—*F. oesalon* breeding habits in Scotland, PATON **466.**

[*Hierofalco*] *Falco rusticolus* on a supposed specimen of *F. islandicus* in the Leipzig Museum, HESSE **278.**

Cerchneis moluccensis microbalia **subsp. n.** Solombo Besar I. Java sea, OBERHOLSER Proc. U.S. N. Mus. **54** p. 178.—*C. araea* **nom. n.** for *C. gracilis* (Lesson); *C. alopex eremica* **nom. n.** for. *C. a. deserticola* Reichw. both preoccupied, OBERHOLSER Proc. Biol. Soc. Wash. **30** p. 76.—*Falco sparverius dominicensis* plumage changes, PETERS **476** p. 401.

Pandion haliaëtus not *Haliaetus leucogaster* found by Capt. Cook on Botany I. off New Caledonia BRASIL **80**.—*P. h. carolinensis* nesting in the Yellowstone, SKINNER **583**.

ORDER STRIGIFORMES.

The Owls of Egypt, KOENIG **330**.

Asio otus field notes and nesting habits, ADAM **1**; habits in Ireland, BURKITT **100**.

Bubo virginianus elutus **subsp. n.** Bolivar Colombia, TODD Proc. Biol. Soc. Wash. **30** p. 6.—*B. v. wapacuthu* (Gmel.) on the identification of this form, OBERHOLSER **431** p. 469.

Nyctea nyctea on Heligoland, KRÜSS **338**.

[*Scops*] *Otus capensis* subspecies discussed, ROBERTS **521** p. 247.—*O. asio kennicotti* field notes in Washington state, BOWLES **74**.

Ninox scutilata subspecies discussed, ROBINSON **523**.—*Spiloglaux novaeseelandiae tasmanica* **subsp. n.** Tasmania, MATHEWS Austr. Av. Rec. **3** p. 70.—*N. humeralis* eggs from N. Queensl. described, H. L. WHITE **675** p. 159.

[*Syrnium*] *Strix baweana* **sp. n.** Bawean I. Java sea, OBERHOLSER P. U. S. N. Mus. **52** p. 190.

Athene noctua spread in Somersetshire, WIGLESWORTH **691**; *Carine noctua* moult of beak, TAVISTOCK **633**.

Speotyto cunicularia grallaria taxonomic note and list of subspecies, COBY **139** p. 6.

[*Strix*] *Tyto arfaki* remarks and criticisms on Mr. Mathew's views, ROTHSCHILD **529**.—*Strix candida* nesting place and eggs, STONE **609**.

ORDER PSITTACIFORMES.

Reference list of colored plates of Parrots, HOPKINSON **290**.

Australian parrots, stray notes, TAVISTOCK **633**.

Note on some Indian parrot names, MATHEWS **385**.

The following Australian species figured and monographed with corrections in nomenclature, &c.: *Harrisornis lathami* pl. 283, *Zanda baudinii* pl. 284, *Z. funerea* pl. 285, *Callocorydon fimbriatus* pl. 286, *Kakatoe galerita* pl. 287, *Lophochroa leadbeateri* pl. 288, *Ducorpsius sanguineus* pl. 289, *Licmetis tenuirostris* pl. 290, *Eolophus roseicapillus* pl. 291, *Leptolophus hollandicus* pl. 292, *Lorius pectoralis* pl. 293, *Geoffroyus geoffroyi* pl. 294, *Polytelis swainsonii* pl. 295, *P. anthopeplus* pl. 296, *Northipsitta alexandrae* pl. 297, *Aprosmictus erythropterus* pl. 298, *Alisterus scapularis* pl. 299, *Platycerus elegans* pl. 300, *flaveolus* pl. 301, *P. caledonicus* pl. 302, *P. icterotis* pl. 303, *P. adscitus* pl. 304, *P. venustus* and *P. hilli* pl. 305, *P. eximius* pl. 306, *Barnardius barnardi* pl. 307, *B. zonarius* pl. 308, *Purpureicephalus spurius* pl. 309, *Psephotus haematonotus* pl. 310, *P. varius* pl. 311, *Northiella haematogaster* pl. 312, *Psephotellus pulcherrimus* pl. 313, *P. chrysopterygius* pl. 314, *Neopsephotus bourkii* pl. 315, *Neonanodes chrysogaster* and *N. chrysostomus* pl. 316, *N. elegans* pl. 317, *N. petrophilus* pl. 318, *Neophema pulchella* pl. 319, *N. splendida* pl. 320, *Lathamus discolor* pl. 321, *Melopsittacus undulatus* pl. 322, *Pezoporus wallicus* pl. 323, *Geopsittacus occidentalis* pl. 324, MATHEWS **381**.

[*Cyclopsittacus*] *Opopsitta coxeni tweedi* **subsp. n.** N. S. Wales, MATHEWS Austr. Av. Rec. **3** p. 128.

Suavipsitta **nom. n.** pro *Nannopsittacus* Mathews preoccupied, MATHEWS Bds. Austr. **6** p. xix.

Microglossus aterrimus habits in captivity, DOMBRAIN **169**.

Calyptorhynchus banksii samueli **subsp. n.** Central Australia, MATHEWS Bds. Austr. **6** p. 120.

Callocorydon **gen. n.** pro *Callocephalon* auct. type *C. fimbriatus* (=*C. galeatum* auct.) p. 150, *C. fimbriatus superior* **subsp. n.** N. S. Wales p. 158, MATHEWS Bds. Austr. **6**.

Cacatua galerita breeding in controlled liberty, WHITLEY **689**.—*Kakatoe galerita interjecta* Victoria p. 184, *K. g. aruensis* Aru. Is. p. 187 **subspp. n.** MATHEWS Bds. Austr. **6**.—*K. parvulus abbotti* **subsp. n.** Solombo Besar I. Java sea, OBERHOLSER P. U.S. Nat. Mus. **54** p. 181.—*Lophochroa leadbeateri superflua* **subsp. n.** S. Australia, MATHEWS Bds. Austr. **6** p. 196.—

Ducorpsius sanguineus westralensis Midwest Australia, *D. s. normantoni* Queensl. **subspp. n.**, MATHEWS Bds. Austr. **6** p. 211.—*Eolophus roseicapillus howei* **subsp. n.** Victoria, MATHEWS Bds. Austr. **6** p. 234.

[*Nasiterna*] *Micropsitta chloroxantha* **nom. n.** for *M.* [=*Nasiterna*] *pygmea* (Q. & G.) preoccupied, OBERHOLSER **442** p. 126.

[*Conurus*] *Aratinga ae. aeruginosa* type locality in Colombia suggested, not Cayenne, CHAPMAN **118** p. 257.

Pyrrhura frontalis (Vieill.) must replace *P. vittata* (Shaw) preoccupied, OBERHOLSER **442** p. 126.—*P. subandina* **sp. n.** Bolivar Colombia, TODD Proc. Biol. Soc. Wash. **30** p. 6.

Brotogeris jugularis exul **subsp. n.** Venezuela, TODD Proc. Biol. Soc. Washington **30** p. 129.

Amazona, structure of the taste organs and the tongue, GRESCHIK **216**.

Triclaria malachitasea (Spix) must replace the name *T. cyanogastra* (Vieill.) preoccupied, OBERHOLSER **442** p. 126.

[*Pionopsittacus*] *Hapalopsittaca fuertesi* figured in colour, CHAPMAN **118** p. 264 pl. xxxvii.

Poeocephalus meyeri, a remarkable colour-variation, SCLATER **567**.

Palaeornis eupatria avensis Burma, *P. e. siamensis* Siam **subspp. n.**, KLOSS J. N. H. Soc. Siam **2** p. 219.

Polytelis swainsonii (Desmarest) must replace the name *P. barrabandii* (Swains.) preoccupied, OBERHOLSER **442** p. 125.

Aprosmictus cyanopygius egg from N. Queensland described, H. L. WHITE **675** p. 163.

Layardiella **gen. n.** for type *Pyrrhulopsis tabuensis* (Gmel.), MATHEWS Bds. Austr. **6** p. 289.

Loriculus asiaticus (Lath.) must take the place of *Loriculus indicus* (Gmel.), preoccupied for the Ceylon Parrot, OBERHOLSER **442** p. 125.

Platycercus elegans fleurieuensis **subsp. n.** Fleurieu Pen. S. Austr., and note on other members of the genus ASHBY Emu **17** p. 44.—*P. caledonicus flindersi* Flinders I. Bass. Str. p. 328, *P. eximius colei* Victoria p. 360 **subspp. n.**, MATHEWS Bds. Austr. **6**.

Psephotus varius ethelae Central Australia, *P. v. orientalis* eastern interior of Australia **subspp. n.**, MATHEWS Bds. Austr. **6** p. 408.

Clarkona **gen. n.** for type *Psephotus varius* Clark, MATHEWS Bds. Austr. **6** p. 391.

[*Neophema*] *Neonanodes chrysostomus cyanopterus* **subsp. n.** Victoria, MATHEWS Bds. Austr. **6** p. 446.

ORDER CORACIIFORMES.

Sub-Order Coraciae.

Coracias garrulus food habits, HAMMLING **233**.—*C. abyssinius* in the Yemen, SCLATER **563** p. 177.

Sub-Order Halcyones.

Alcedo hercules **nom. n.** pro *A. grandis* Blyth 1845 preoccupied, LAUBMANN München Verhandl. Ornith. Ges. **13** p. 105.

Ceyx rufidorsus and allied forms discussion p. 23, *C. tridactylus macrocarus* **subsp. n.** Nicobar Is. p. 24, OBERHOLSER Bull. U.S. N. Mus. No. **98**.

Dacelo gigas watsoni **subsp. n.** N. Queensl., MATHEWS Austr. Av. Rec. **3** p. 70.—*D. minor*, eggs from N. Queensl. described, H. L. WHITE **675** p. 162.

[*Halcyon*] *Sauropatis chloris cyanescens* **subsp. n.** Pulo Taya off S.E. Sumatra, OBERHOLSER P. U.S. N. Mus. **52** p. 189.

Sub-Order Bucerotes.

Lophoceros nasutus subspecies discussed, ROBERTS **521** p. 248.—*L. erythrorhynchus damarensis* distribution and validity of race, FINCH-DAVIES **186**.

Sub-Order Upupae.

Irrisor erythrorhynchus sub-species discussed, ROBERTS **521** p. 250.

Rhinopomastus cyanomelas sub-species discussed, ROBERTS **521** p. 253.

Sub-Order Meropes.

Merops apiaster in Brandenburg, SCHALOW **547**; in Yemen, SCLATER **563** p. 174.

Sub-Order Momoti.

Urospatha martii semirufa on the tail-rackets, CHAPMAN **118** p. 267.

[*Prionornis*] *Electron platyrhynchus* taxonomy of Colombian races, CHAPMAN **118** p. 268.

Sub-Order Caprimulgi.

Nyctibius griseus abbotti **subsp. n.** Haiti, RICHMOND Smithson. Misc. Coll. **68** No. 7 p. 1.

Chordeiles m. minor (Forster) antedates *C. v. virginianus* (Gmel.) for the Night-hawk, RICHMOND **507**.

Microsiphonorhis **gen. n.** for type *M. brewsteri* **sp. n.** Prov. Azua S. Domingo, W. I., CHAPMAN Bull. Amer. Mus. **37** p. 329.

Caprimulgus nigrescens egg and nesting place described with photo., BEEBE **51** p. 219.—*C. nigrescens* embryology and pterylosis, HARTLEY **51** p. 321.—*Nyctipolus h. hirundinaceus* taxonomic note p. 3, *N. h. cearae* **subsp. n.** Ceara Brazil p. 4, CORY Chicago Field Mus. Publ. Zool. **12**.

Sub-Order Cypseli.

Review of the Swifts of the Argentine DABBENE **148**.

Collocalia lowi and *C. vestita amechana* taxonomy, OBERHOLSER **438** p. 27.—*C. francica yorki* = *C. fuciphaga yorki*, MATHEWS **389** p. 181.

[*Chaetura*] *Streptoprocne zonaris* zonal distribution of the two Colombian races, CHAPMAN **118** p. 276.—*C. novaeguineae mamberana* **subsp n.** Dutch New Guinea, NEUMAN Orn. Monatsb. **25** p. 153.—*C. bürgersi* **sp. n.** New Guinea, REICHENOW J. Orn. **1917** p. 514.

Cypseloides senex in Misiones, Argentina, DABBENE **150**.

Aëronautes melanoleucus nesting notes in California, HANNA **235**.

[*Cypselus*] *Micropus* height of flight, STRESEMANN **614**.—*Apus apus* arrival dates in Holland, SWAEN **624**; *Micropus apus* migrations in the Main Valley, STADLER **599**; song, STADLER & SCHMITT **602**; HOFFMANN **285**.

Sub-Order Trochili.

Phoethornis striigularis subrufescens **subsp. n.** Pacific coast region of Colombia, CHAPMAN Bull. Amer. Mus. **36** p. 283.

[*Aphantochroa*] *Phaeochroa cuvieri notia* **subsp. n.** Bolivar Colombia, TODD Proc. Biol. Soc. **30** p. 5.

Lepidopyga lilliae **sp. n.** Santa Marta Colombia, STONE Proc. Acad. N. Sci. Philad. **69** p. 204.

Helianthea coeligena ferruginea **subsp. n.** Colombia, CHAPMAN Bull. Amer. Mus. **36** p. 298.

Boissonneaua f. flavescens taxonomic note, CHAPMAN **118** p. 300.

[*Eriocnemis*] *Vestipedes paramillo* **sp. n.** Colombia, CHAPMAN Bull. Amer. Mus. **36** p. 301.

[*Spathura*] *Ocreatus u. underwoodi* distinctive characters, CHAPMAN **118** p. 303.

Heliangelus exortis sexual and othe characters, CHAPMAN **118** p. 304.

Oxypogon stubeli addt. description of male etc. etc., CHAPMAN **118** p. 306.

Cyanolesbia distrib. and distinctive characters of Colombian forms, CHAPMAN **118** p. 307.

ORDER TROGONES.

Trogonurus assimilis characters in Colombia, CHAPMAN **118** p. 314.

Pyrotrogon oreskios uniformis **subsp. n.** Trang Malay Peninsula, ROBINSON J. Fed. Malay-Mus. **7** p. 149.

ORDER COCCYGES.

Sub-Order Musophagi.

Turacus emini and *T. ugandae* are these distinct species? LÖNNBERG **355** p. 15.

Sub-Order Cuculi.

Cuckoos in captivity, HOPKINSON **291**.

Cuculus canorus facts and theories on breeding habits, MEIKLEJOHN **393**; spring migration in Switzerland, BRETSCHER **88**.—*C. intermedius* and other Japanese Cuckoos, on their eggs, JOURDAIN **310**.

Coccyzus minor nesiotis status and synonymy, PETERS **476** p. 409.

Urodynamis taitensis pheletes **subsp. n.** Otago N. Zealand, WETMORE Proc. Biol. Soc. Wash. **30** p. 1.

Eudynamis orientalis races discussed ROBINSON **523** p. 164.

Centropus pymi and *C. grilli* taxonomic remarks, ROBERTS **521** p. 254.

Piaya cayana nigricrista taxonomic and critical notes, CHAPMAN **118** p. 320.

Crotophaga ani embryology and structure, HARTLEY **51** p. 307.

ORDER SCANSORES.

Sub-Order Capitones.

Tachyphonus luctuosus panamensis **subsp. n.** Panama, TODD Proc. Biol. Soc. Washington **30** p. 128.

Capito maculicoronatus characters of Colombian races, CHAPMAN **118** p. 325.

Sub-Order Rhamphastides.

Nesting habits and eggs of the Toucans of Bt. Guiana, BEEBE **51** p. 183.

Coloured plate of the bills of Colombian Toucans drawn from fresh specimens, CHAPMAN **118** p. 328 pl. 38.

Rhamphastos ambiguus abbreviatus remarks and measurements of races, CHAPMAN **118** p. 329.—*R. cuvieri* sketches and avicult. notes, PAGE **461**.

ORDER PICIFORMES.

Sub-Order Galbulae.

Brachygalba fulviventris caquetae **subsp. n.** Colombia, CHAPMAN Bull. Amer. Mus. **36** 1917 p. 338.

Sub-Order Buccones.

Malacoptila striata (Spix) must replace *M. torquata* (Wagler) preoccupied, OBERHOLSER **442** p. 126.

Sub-Order Pici.

Colaptes auratus luteus nesting notes, BALES **43**.

Gecinus rubripectus **sp. n.** Tonkin, KURODA Annot. Zool. Jap. **9** p. 228.

Chloronerpes rubiginosus gularis critical remarks, CHAPMAN **118** p. 347.

Sphyrapicus thyroideus geographical variation in California, SWARTH **626**.

[*Dendrocopus*] *Dryobates leuconotus namiyei* Stejn. diagnostic characters (Japanese), UCHIDA **655**.

Mesopicus schoensis taxonomic note, *M. s. semischoensis* **subsp. n.** Kasindi Belgian Congo, LÖNNBERG Ark. Zool. **10** No. 24 p. 19.

Celeus innotatus **sp. n.** Bolivar Colombia, TODD Proc. Biol. Soc. Wash. **30** p. 5.

Chrysocolaptes guttacristatus note on the sub-species, ROBINSON **523** p. 161.

Picumnus olivaceus critical remarks on Colombian races, CHAPMAN **118** p. 356.

ORDER MENURIFORMES.

Menura novaehollandiae nesting notes and photos., RAMSAY & KEENE **491**.

ORDER PASSERIFORMES.

FAM. PTEROPTOCHIDAE.

Scytalopus field notes, MILLER **402**. —*S. simonsi* **sp. n.** Bolivia, CHUBB Bull. B.O.C. **38** p. 17.

FAM. CONOPOPHAGIDAE.

Conopophaga aurita occidentalis **subsp. n.** Ecuador, CHUBB Bull. B.O.C. **38** p. 34.

FAM. FORMICARIIDAE.

Cymbilanius lineatus sub-species reviewed, *C. l. intermedius* **subsp. n.** Rio Madeira Brazil, HARTERT & GOODSON Nov. Zool. **24** p. 495.

Thamnophilus nigriceps note on nomenclature, CHAPMAN **118** p. 365.—*T. naevius* must stand as *T. punctatus*, *T. p. interpositus* Bogota p. 496, *T. doliatus tobagensis* Tobago p. 497, *T. bernardi baroni* N.W. Peru p., 498 **subspp. n.** HARTERT & GOODSON Nov. Zool. **24**.—*Hypolophus bernardi cajamarcae* **subsp. n.** Peru Hellmayr München Verhandl. Orn. Ges. **13** p. 188.

Thamnomanes caesius glaucus nest and eggs described with photo., BEEBE **51** p. 227.

[*Formicivora*] *Microrhopias grisea intermedia* taxonomic note, *M. g. hondae* suppressed, CHAPMAN **118** p. 376.—*Microrhopias melanogastris iliaca* **subsp. n.** Bolivia, TODD Proc. Biol. Soc. **30** p. 5.

[*Gymnopithys*] *Anoplops v. rubigula* nest and eggs described with photo., BEEBE **51** p. 228.

[*Myrmelastes*] *Myrmeciza maculifer* two subspecies recognised with distributional note, CHAPMAN **118** p. 382.

Sclateria naevia trinitatis **subsp. n.** Trinidad, HARTERT & GOODSON Nov. Zool. **24** p. 499.

[*Drymophila*] *Myrmeciza longipes griseipectus* variation in the males, HARTERT & GOODSON **257** p. 498.—*M. laemosticta palliata* **subsp. n.** Santander Colombia, TODD Proc. Biol. Soc. Washington **30** p. 129.

[*Hypocnemis*] *Hylophylax naevioides subsimilis* **subsp. n.** Bolivar Colombia, TODD Proc. Biol. Soc. Washington **30** p. 129.

Pittasoma harterti **sp. n.** Colombia, CHAPMAN Bull. Amer. Mus. **36** p. 392.

Grallaria guatimalensis chocoensis **subsp. n.** Colombia p. 394, *G. alleni* p. 395, *G. milleri* p. 396 figured on pl. 39, CHAPMAN Bull. Amer. Mus. **36**.

Grallaricula nana olivascens **subsp. n.** Venezuela, HELLMAYR München Verhandl. Orn. Ges. **13** p. 117.

FAM. DENDROCOLAPTIDAE.

Geositta punensis **sp. n.** N.W. Argentina p. 54, *G. rufipennis burmeisteri* **subsp. n.** N.W. Argentina p. 55, DABBENE Physis **3**.

Cinclodes oustaleti hornensis p. 58 and *C. antarcticus maculirostris* p. 59 **subspp. n.** Hermit I. Cape Horn, DABBENE Physis **3**.

Clibanornis dendrocolaptoides in Misiones Argentina, DABBENE **150**.

Synallaxis unirufa meridana **subsp. n.** Venezuela, HARTERT & GOODSON Nov. Zool. **24** p. 499.—*S. terrestris bolivari* **subsp. n.** near Caracas Venezuela, HARTERT Bull. B.O.C. **37** p. 31.

Poecilurus **gen. n.** for type *Synallaxis candaei* Lafres. *P. atrigularis* **sp. n.** Magdalena Colombia, TODD Proc. Biol. Soc. Washington **30** p. 129.

Siptornis berlepschi **sp. n.** Bolivia, HELLMAYR München Verhandl. Orn. Ges. **13** p. 113.

Pseudocolaptes boissonneautii meridae **subsp. n.** Venezuela and other forms revised, HARTERT & GOODSON Nov. Zool. **24** p. 499.

Automolus roraimae **nom. n.** pro *Philydor albigularis* Salv. Godm. preoccupied, HELLMAYR München Verhandl. Orn. Ges. **13** p. 199.

Philydor ochrogaster **sp. n.** Peru, HELLMAYR München Verhandl. Orn. Ges. **13** p. 111.—*P. erythrocercus* note on subspecies, HARTERT & GOODSON **257** p. 500.

Xenops genibarbis ridgwayi **subsp. n.** Costa Rica and Panama p. 417, *X. rutilus heterurus* note on p. 418, HARTERT & GOODSON Nov. Zool. **24**.

Glyphorhynchus cuneatus castelnaudi distribution, *G. c. simillimus* **subsp. n.** Cayenne, HARTERT & GOODSON Nov. Zool. **24** p. 419.

Sittasomus griseicapillus reiseri **subsp. n.** N.E. Brazil, HELLMAYR München Verhandl. Orn. Ges. **13** p. 190.

Xiphocolaptes obsoletus **sp. n.** Bolivia, *X. procerus rostratus* **subsp. n.** Bolivar Colombia, *X. major obscurus* **nom. n.** pro *X. m. saturatus* Cherrie, TODD Proc. Biol. Soc. Wash. **30** p. 5.

Picolaptes albolineatus littoralis **subsp. n.** Venezuela, HARTERT & GOODSON Nov. Zool. **24** p. 417.

Xiphorhynchus nanus demonstratus **subsp. n.** Venezuela, HARTERT & GOODSON Nov. Zool. **24** p. 419.—*Campylorhamphus thoracicus* and *C. pusillus* taxonomic notes, CHAPMAN **118** p. 424.

Dendrocolaptes validus taxonomic note, *D. v. seilerni* subsp. n. Venezuela, HARTERT & GOODSON Nov. Zool. 24 p. 416.

FAM. TYRANNIDAE.

Mecocerculus leucophrys nigriceps taxonomic note, HARTERT & GOODSON 257 p. 494.

Platyrhynchus coronatus note on distribution, HARTERT & GOODSON 256 p. 416.

Rhynchocyclus sulphurescens on the Colombian subspecies, CHAPMAN 118 p. 434.—*R. sulphurescens* subspecies reviewed p. 414, *R. s. pallescens* Bolivia p. 414, *R. s. cherriei* Guiana p. 414, *R. s. berlepschi* Venezuela p. 415, subspp. n. HARTERT & GOODSON Nov. Zool. 24.

Lophotriccus squamaecristatus note with measurements of Colombian races CHAPMAN 118 p. 442.

Mionectes o. oleaginus nest and eggs described with photo., BEEBE 51 p. 223.

Leptopogon superciliaris subspecies reviewed, *L. s. venezuelensis* subsp. n. Venezuela, HARTERT & GOODSON Nov. Zool. 24 p. 413.—*L. rufipectus* (Lafr.) antedates *L. erythrops* Scl., *L. taczanowskii* nom. n. pro *L. rufipectus* Tacz., HELLMAYR München Verhandl. Orn. Ges. 13 p. 198.

Tyranniscus acer nest and eggs described with photo., BEEBE 51 p. 221.

Elaenia pudica distribution of the races, CHAPMAN 118 p. 456.—*E. gaimardii trinitatis* subsp. n. Trinidad, HARTERT & GOODSON Nov. Zool. 24 p. 411.

Myiozetetes cayanensis hellmayri subsp. n. W. Ecuador, HARTERT & GOODSON Nov. Zool. 24 p. 412.

Pitangus s. sulphuratus pterylosis, HARTLEY 51 p. 325.

Hirundinea bellicosa pallidior subsp. n. N.W. Argentina, HARTERT & GOODSON Nov. Zool. 24 p. 411.

Myiobius modestus suffusus subsp. n. Bolivar Colombia, TODD Proc. Biol. Soc. Wash. 30 p. 4.

Blacicus brachytarsus guianarum subsp. n. Surinam, HARTERT & GOODSON Nov. Zool. 24 p. 411.

Myiarchus crinitus residuus Howe from Florida worthy of recognition, OBERHOLSER 431 p. 194.

Empidonomus v. varius pterylosis, HARTLEY 51 p. 326; nest and eggs described, BEEBE 51 p. 225.

Tyrannus tyrannus in the Bahamas, RILEY 514.—*T. melancholius occidentalis* Tepic Mexico, HARTERT & GOODSON Nov. Zool. 24 p. 412.

FAM. PIPRIDAE.

Pipra aureola nest and eggs described with photo., BEEBE 51 p. 234.—*P. leucocilla minimus* nom. n. pro *P. l. minor* preoccupied, CHAPMAN Bull. Amer. Mus. 36 p. 480.

FAM. COTINGIDAE.

Pachyrhamphus peruanus sp. n. S.E. Peru, HARTERT & GOODSON Nov. Zool. 24 p. 410.

Attila caniceps Bolivar Colombia, *A. neoxenus* Bolivia spp. n., TODD Proc. Biol. Soc. Wash. 30 p. 4.

Rupicola peruviana aurea distribution and further remarks on taxonomy, CHAPMAN 118 p. 496.

[*Ampelion*] *Ampelioides tschudii* (Gray) is the correct name for *Ampelion cinctus* auctt., HELLMAYR München Verhandl. Orn. Ges. 13 p. 110.

[*Pipreola*] *Euchlornis riefferii signata* nom. n. pro *Ampelis viridis* d'Orb. and Lafr., *E. pulchra* nom. n. pro *Ampelis elegans* Tschudi preoccupied, HELLMAYR München Verhandl. Orn. Ges. 13 p. 199.

FAM. ATRICHORNITHIDAE.

Atrichornis rufescens tweedi subsp. n. N. Queensl., MATHEWS Austr. Av. Rec. 3 p. 71.

FAM. HIRUNDINIDAE.

Plumages of North American Swallows, CHAPMAN 116.

Migrations of North American Swallows, OBERHOLSER 434.

[*Ptyonoprogne*] *Riparia rufigula* on the subspecies, MACKWORTH-PRAED **374** p. 389.

Hirundo rustica the races and their characters and the generic name discussed, OBERHOLSER **438** pp. 28–32.—*Hypurolepis javanica abbotti* **subsp. n.** Anamba Is., OBERHOLSER Bull. U.S. Nat. Mus. **98** p. 32.

Progne chalybea nesting habits in Guiana, HARTLEY **51** p. 328.—*Phaeoprogne tapera immaculata* status discussed, CHAPMAN **118** p. 502.

FAM. MUSCICAPIDAE.

Alseonax epulatus, *A. comitatus*, and *A. tessmanni* synonymy and taxonomy, O. GRANT **451** p.82.—*Muscicapa somaliensis*=*Alseonax gambagae*, SCLATER **563** p. 169.

Muscicapa moult of British species, WITHERBY **697**.—*M. s. striata* curious nesting sites, OWEN & JOURDAIN **460**.—*M. caerulescens*, *M. c. cinerea*, *M. lugens*, *M. griseigularis* and *M. toruensis* distinctive characters and taxonomic notes, O. GRANT **451** p. 85.

[*Hedymela*] *Muscicapa collaris* breeding and other habits in Silesia, NATORP **417**.

Cyornis banyumas lampra **subsp. n.** Anamba Is., OBERHOLSER Bull. U.S. Nat. Mus. No. **98** p. 35.

Petroica multicolor boodang (Less.) replaces *P. m. coccinea*, MATHEWS **383** p. 74.—*Myiomoira macrocephala* connection with *Turdus minutus* Forster, BRASIL **81**.

Gerygone stictilaema **sp. n.** New Guinea, REICHENOW J. Orn. **1917** p. 514.

Pseudogerygone flavilateralis connection with *Turdus minutus* Forster, BRASIL **81**.—*P. personata watsoni* **subsp. n.** N. Queensl., MATHEWS Austr. Av. Rec. **3** p. 71.

Parisoma blanfordi distincta **subsp. n.** Yemen, HARTERT Nov. Zool. 24 p. 459.

Chloropeta massaica and *C. natalensis* relationship discussed, MACKWORTH-PRAED **374** p. 385.

Chloropetella suahelica **gen.** et **sp. n.** German E. Africa, ROBERTS Ann. Transvaal Mus. **6** p. 1.

Hypothymis azurea races listed, OBERHOLSER **438** p. 39.

Callaeops periophthalmica O. Grant=*Terpsiphone nigra*, RICHMOND **509**.

Mastersornis **gen. n.** for *Todus rubeculus* Lath. to replace *Myiagra* Vig. & Horsf. preoccupied, MATHEWS Austr. Av. Rec. **3** p. 78.

Monacha canescens claudia **subsp. n.** N. Queensl., MATHEWS Austr. Av. Rec. **3** p. 71.

FAM. CAMPOPHAGIDAE.

Artamides sumatrensis calopolius **subsp. n.** Anamba Is., OBERHOLSER Bull. U.S. Nat. Mus. **98** p. 34.

Edoliisoma schisticeps reichenowi N. New Guinea p. 153, *E. s. moszkowskii* Dutch N. Guinea, *E. s. bernsteini* Beran Pen. Dutch New Guinea p. 154 **subspp. n.**, NEUMANN Orn. Monatsb. **25**.—*E. obiense pelingi* Peling I. p. 27, *E. mindanense sula* Sula Besi I. p. 28, *E. morio pererratum* Tukang-Besi Is. p. 28 all near Celebes, **subspp.n.** HARTERT Bull. B.O.C. **38**.

Lalage karu review of subspecies p. 15, *L. k. obscurior* Ferguson and Goodenough Is. p. 16, *L. k. keyensis* Key Is. p. 17, *L. k. pallescens* Louisiade Is. p. 17, **subspp. n.**, ROTHSCHILD & HARTERT Bull. B.O.C. **37**.

Perissolalage chalepa **gen.** et **sp. n.** Solombo Besar. I. Java sea, OBERHOLSER P. U.S. Nat. Mus. **54** p. 182.

FAM. PYCNONOTIDAE.

Aegithina viridissima thapsina **subsp. n.** Anamba Is, OBERHOLSER Bull. U.S. Nat. Mus. No. **98** p. 40.

Irena. This genus should be placed in a special family Irenidae, OBERHOLSER **440**.

Glauconympha **gen. n.** for *Irena cyanea* Begbie p. 539, *G. cyanea megacyanea* **subsp. n.** Barussan Is. off Sumatra p. 540, OBERHOLSER J. Washington Acad. Sci. **7**

Hypsipetes psaroides nigrescens **subsp. n.** Upper Burma, BAKER Bull. B.O.C. **38** p. 15.

Haringtonia **gen. n.** for *Hypsipetes* preoccupied; type, *H. psaroides*, MATHEWS & IREDALE Aust. Av. Rec. **3** p. 124.

[*Hemixus*] *Iole virescens cinnamomeoventris* **subsp. n.** Burma, BAKER, Bull. B.O.C. **38** p. 16.

Microtarsus chalcocephalus baweanus taxonomic note p. 192, *M. atriceps abbotti* **subsp. n.** Bawean I. Java sea, OBERHOLSER, P. U.S. N. Mus. **52** p. 193.

Criniger pallida grandis **subsp. n.** Yunnan, BAKER Bull. B.O.C. **38** p. 15.

[*Bleda*] *Phyllastrephus indicator lacuum* Central lake districts, *P. i. togoensis* Togo, *P. i. congensis* Congo region **subspp. n.**, REICHENOW J. Ornith. 1917 p. 115.

Andropadus importunus noomei **subsp. n.** N.E. Transvaal, ROBERTS Ann. Transvaal Mus. **5** p. 259.

Phyllastrephus terrestris rhodesiae **subsp. n.** N.W. Rhodesia, ROBERTS Ann. Transvaal Mus. **5** p. 258.

Molpastes haemorrhous pallida **subsp. n.** continental India, BAKER Bull. B.O.C. **38** p. 15.

Pycnonotus reichenowi=*P. xanthopygos*, SCLATER **563** p. 169.—*P. plumosus chiroplethis* p. 41, *P. simplex halizonus* p. 43, *P. brunneus zapolius* p. 45 **subspp. n.** Anamba Is., OBERHOLSER Bull. U.S. Nat. Mus. No. **98**.—*P. brunneus zaphaeus* **subsp. n.** Pulo Mata Siri Java Sea, OBERHOLSER, P. U.S. Nat. Mus. **54** p. 194.

Xanthixus flavescens vivida **subsp. n.** Burma, BAKER Bull. B.O.C. **38** p. 16.

[*Otocompsa*] *Molpastes leucotis* early breeding, WAITE **658**.

Tylas should be removed from the Pycnonotidae to a new family Tylidae near the Laniidae, OBERHOLSER **439**.

FAM. TIMELIIDAE.

Eupetes macrocercus griseiventris **subsp. n.** Siam, BAKER Bull. B.O.C. **38** p. 8.

Hylacola, notes and observations, HOWE **297**.

Argya keniana on the form on the Tsavo river B.E.A., MACKWORTH-PRAED **374** p. 383.

Pomatorhinus olivaceus siamensis Siam, *P. nuchalis klossi* Siam, **subspp. n.** BAKER Bull. B.O.C. **38** p. 9.

Garrulax moniliger leucotis **subsp. n.** Siam, BAKER Bull. B.O.C. **38** p. 8.

Dryonastes tsinlingensis **sp. n.** Shensi, China, REICHENOW J. Ornith. **1917** p. 391.

Calamanthus campestris hartogi habits *C. c. peroni* **subsp. n.** Peron, W. Australia, CARTER Ibis **1917** p. 586.

Maclennania **gen. n.** for type *Cinclorampus mathewsi*, MATHEWS Austr. Av. Rec. **3** p. 127.

[*Turdinus*] *Malacocincla abbotti baweana* **subsp. n.** Bawean I. Java sea, OBERHOLSER P. U.S. N. Mus. **52** p. 194. —*M. a. sirensis* **subsp. n.** Pulo Mata Siri I. Java sea, OBERHOLSER P. U.S. N. Mus. **54** p. 195.—*Turdinus rufipennis* and *T. fulvescens* taxonomic notes, O.-GRANT **451** p. 79.—*T. tanganjicae* W. of Tanganyika, REICHENOW J. Ornith. **1917** p. 391.—*Horizillas magnirostris* should not be referred to *Turdinus*, OBERHOLSER **438** p. 47.

Corythocichla brevicaudata herberti **subsp. n.** Siam, BAKER Bull. B.O.C. **38** p. 10.

Stachyridopsis rufifrons obscura **subsp. n.** Siam, BAKER Bull. B.O.C. **38** p. 10.

Cyanoderma erythropterum sordida **subsp. n.** Siam, BAKER Bull. B.O.C. **38** p. 10.

Mixornis r. rubricapilla Malayan forms discussed, ROBINSON **523** p. 176. —*M. pileata zophera* **subsp. n.** Anamba Is., OBERHOLSER Bull. U.S. N. Mus. No. **98** p. 49.

Herpornis xantholeuca interposita **subsp. n.** Malay Pen., HARTERT, Bull. B.O.C. **38** p. 20.

FAM. TROGLODYTIDAE.

Plumages of North American Wrens, CHAPMAN **116**.

Cinnicerthia olivescens distribution and taxonomic note, CHAPMAN **118** p. 508. —*C. paramosa* **sp. n.** Ecuador, REICHENOW J. Ornith. **1917** p. 391.

[*Thryothorus*] *Pheugopodius m. mystacalis* taxonomic note, CHAPMAN **118** p. 515.

[*Cistothorus*] *Telmatodytes palustris* revision of subsp. p. 308, *T. p. aestuarius* **subsp. n.** California p. 310, SWARTH Auk **34**.

Troglodytes musculus neglectus **subsp. n.** Colombia and other Colombian subspecies, CHAPMAN Bull. Amer. Mus. **36** p. 520.

Henicorhina prostheleuca and *H. leucophrys* on the Colombian subspecies, *H. p. albilateralis* **subsp. n.** Colombia, CHAPMAN Bull. Amer. Mus. **36** p. 524.

Leucolepia m. musica nest and eggs described with photo., BEEBE **51** p. 231.

FAM. CINCLIDAE.

Cinclus aquaticus habits, HENNEMANN **270**.—*C. cinclus leucogaster* taxonomic remarks, KOLLIBAY **332** p. 457.

FAM. MIMIDAE.

Mimus polyglottos orpheus the Haitian and Jamaican races identical, PETERS **476** p. 415.

Toxostoma redivivum ecology and distribution of the three races in California, GRINNELL **218**.

FAM. TURDIDAE.

Moult of British Thrushes, WITHERBY **697** p. 39.

[*Oreocichla*] *Geocichla varia* on Heligoland, KRÜSS **338**.

Turdus viscivorus review of races p. 506, *T. v. jubilaeus* **subsp. n.** Russia p. 511, LUCANUS J. Orn. **1917** p. 511; additional remarks from Gouv. Minsk W. Russia, ZEDLITZ J. Ornith. **1917** vol. ii p. 304.—*T. menachensis* additional description, SCLATER **563** p. 161.—*T. ruficollis* not a subspecies of *T. atrogularis*, KOLLIBAY **332** p. 450. —*T. pondoensis* **sp. n.** Pondoland S. Afr., REICHENOW J. Ornith. **1917** p. 391.—*Planesticus migratorius caurinus* GRINNELL Pacific coast-lands from Washington to Alaska a good subspecies, OBERHOLSER **431** p. 195.

[*Hylocichla*] *Turdus iliacus coburni* remarks on this form, LUCANUS **362**. —*T. musicus* (auctt.) and *T. merula* breeding hybrids, FULLJAMES **198**.

Monticola rufocinerea sclateri **subsp. n.** Yemen, HARTERT Nov. Zool. **24** p. 459.

Accentor modularis voice, STADLER **600**.—*A. fagani* figured in colour SCLATER **563** p. 162.

Ephthianura crocea noticed with coloured plate, CAMPBELL **106**.

Ashbyia lovensis nest and eggs, WHITE & WAITE **686**; field-notes, LOWE **359**.

Phoenicurus tithys nidification and incubation, RASPAIL **492**.—*Ruticilla cairii* Gerbe, taxonomic note MENEGAUX **396**.

[*Aëdon*] *Luscinia luscinia* note on a Yemen example, SCLATER **563** p. 163.

Cercotrichas podobe recorded in Yemen, SCLATER **563** p. 165.

Kittacincla melanura nigricauda taxonomic note, OBERHOLSER **449** p. 197.—*K. malabarica ochroptila* p. 51, *K. m. heterogyna* p. 53 **subspp. n.** Anamba Is., OBERHOLSER Bull. U.S. N. Mus. No. **98**.

Irania gutturalis recorded from Yemen, SCLATER **563** p. 165.

Neocossyphus rufus arrhenii **subsp n.** Beni Belgian Congo, LÖNNBERG Ark. Zool. **10** No. 24 p. 30.

Erythropygia leucoptera vulpina is a distinct subspecies, MACKWORTH-PRAED **374** p. 382.

Myrmecocichla nigra, *M. arnotti* and *M. a. leucolaema* on the distinctive characters, HARTERT **241**.

Pratincola torquata salax note on variation in two males from Elgon, LÖNNBERG **356** p. 4.—*Saxicola torquata rubicola*, *S. t. maura*, *S. t. indica* all occur in the Yemen, HARTERT **254** p 460.

[*Saxicola*] *Œnanthe hispanica* and its relation to *Saxicola gaddi*, WITHERBY **700**; taken on Tuskar rock, new to Ireland, PATTEN **467**.—*Œ. yemenensis* additional description, SCLATER **563** p. 166.

Sialia sialis episcopus **subsp. n.** Tamaulipas Mexico, OBERHOLSER Proc. Biol. Soc. Wash. **30** p. 27.

FAM. SYLVIIDAE.

Moult of British Warblers, WITHERBY **697** pp. 285, 15.

Acrocephalus arundinaceus orientalis in Sussex, first record for British Isles, NICHOLS **423**; in relation to the breeding of the cuckoo in Japan, NIBE **421**. —*A. palustris* and other warblers near Leipzig, SCHLEGEL **554**.

Cisticola cisticola arabica **subsp. n.** Yemen, HARTERT Nov. Zool. **24** p. 458.

Bradypterus grandis **sp. n.** Cameroon, O. GRANT Ibis **1917** p. 78.—*B. usambarae* **sp. n.** Usambara Germ. East Afr. REICHENOW J. Ornith. **1917** p. 391.

Calamocichla palustris **sp. n.** Massailand G. E. Afr., REICHENOW J. Ornith **1917** p. 391.

Sylvia communis icterops in Yemen, SCLATER **563** p. 157.—*S. deserticola maroccana* **subsp. n.** Atlas Mt. W. Marocco, HARTERT Bull. B.O.C. **38** p. 6.—*S. norrisae* **sp. n.** Fayoum Egypt, NICOLL Bull. B.O.C. **37** p. 28.

Phylloscopus t. trochilus nesting sites above ground level, ARUNDEL and others, **19**.—*P. collybita tristis* in Kirkcudbrightshire first record, BEGG **53**. —*P. collybita abietinus* recorded in Yemen SCLATER **563** p. 159.

[*Oreopneuste*] *Phylloscopus fuscatus* in Sussex, second British record, NICHOLS **422**.

Phaeorhadina **gen. n.** for *Phylloscopus fuseatus* (Blyth), MATHEWS & IREDALE Austr. Av. Rec. **3** p. 116.

[*Acanthopneu'ste*] *Phylloscopus trochiloides fokiensis* **subsp. n.** Fokien China, HARTERT Bull. B.O. C. **37** 1917 p. 43.

Acanthiza and *Geobasileus* distribution, taxonomy and synonymy of the species, HOWE **285**.—*A. pygmaea* eggs from N. S. Wales described, H. L. WHITE **675** p. 160.—*A. marianae* figured in colour with additional notes, S. A. WHITE **685**.—*A. winiamida* **sp. n,** Victoria, WILSON Emu **16** p. 169.

Keartlandia **gen. n.** for *Acanthiza flaviventris* Ashby, MATHEWS Austr. Av. Rec. **3** p. 78.

Acanthornis magnus field-notes, ASHBY **20**.

Apalis jacksoni minor **subsp. n.** Cameroon p. 76 and *T. ansorgei* **sp. n** Angola p. 77, O. GRANT Ibis **1917**.—*A. porphyrolaema* note on two examples from Elgon, LÖNNBERG **356** p. 4.

[*Euprinoides*] *Apalis rufigularis* taxonomy and sexual distinctions, O. GRANT **451** p. 77.

Camaroptera superciliaris races discussed, O. GRANT **451** p. 75.

Scotocerca inquieta buryi distinctive characters, SCLATER **563** p. 159.

[*Burnesia*] *Prinia gracilis natronensis* **subsp. n.** Lower Egypt, NICOLL Bull. B.O.C. **37** p. 29.

Malurus whitei is a synonym of *M. callainus* Gld., ASHBY **22** p. 232.—*Nesomalurus leucopterus* rediscovery on Dirk Hartog I. W. Austr. and redescription with coloured figure, MATHEWS **384**; also CARTER **110** p. 593.—*Hallornis leuconotus* and *H. cyanotus* question of identity and other points discussed, MATHEWS **384** p. 88, also CARTER **110** p. 589 pl. x.

Devisornis **gen. n.** for type *Malurus alboscapulatus*, MATHEWS Austr. Av. Rec. **3** p. 90.

Stipiturus malachurus hartogi figured with note on discovery, CARTER **110** p. 597 pl. xi.—*S. ruficeps* nest and eggs, H. L. WHITE **678**.

[*Amytornis*] *Diaphorillas textilis* rediscovery, *D. t. carteri* **subsp. n.** Dirk Hartog I. W. Austr., MATHEWS Austr. Av. Rec. **3** p. 87 pl.; habits and additional description, CARTER **110** p. 599.—*A. merrotsii* field-notes, LOWE **359**.

Magnamytis dorotheae a distinct species not a subspecies, MATHEWS **389** p. 183.

FAM. VIREONIDAE.

Vireo josephae mirandae **subsp. n.** Venezuela, HARTERT Bull. B.O.C. **37** p. 32.—*V. bellii arizonae* Ridgway a well-defined race, OBERHOLSER **431** p. 322.—*V. crassirostris tortugae* **subsp. n.** Tortuga I. Haiti, RICHMOND Smithson Misc. Coll. **68** No. 7 p. 2.

Cyclarhis flavipectus parvus **subsp. n.** Colombia, CHAPMAN Bull. Amer. Mus. **36** p. 541.

FAM. AMPELIDAE.

Ampelis garrulus structure and life history, SCHAANNING **545**; *Bombycilla garrula* three races are recognizable, OBERHOLSER **432**; regurgitation habit, BERGTOLD **56**.

FAM. ARTAMIDAE.

Artamus leucoryn amydrus **subsp. n.** Solombo Besar I. Java Sea, OBERHOLSER P. U.S. Nat. Mus. **54** p. 185.—*Austrartamus melanops* nest and eggs figured, S. A. WHITE **684** p. 460 pl. 31 fig. 1.

FAM. LANIIDAE.

Lanius yemenensis = *L. minor*, SCLATER **563** p. 153.—*L. arabicus* O. GRANT = *L. buryi*, SCLATER **563** p. 154.

[*Enneoctonus*] *Lanius collurio* a variation, FISCHER-SIGWART **187**; breeding habits, OWEN **459**.

[*Otomela*] *Lanius c. phoenicuroides* and *L. c. isabellinus* differences and breeding ranges, KOLLIBAY **332** p. 444.

Pachycephala inornata eggs from N. Queensl. described with photo., H. L. WHITE **675** p. 163.

FAM. PARIDAE.

[*Poecile*] *Parus salicarius* field notes, BACMEISTER **27**.—*Penthestes hudsonicus* wintering in southern New England and New Jersey, TOWNSEND **648**, WRIGHT **703**.

[*Lophophanes*] *Parus dichrous wellsi* **subsp. n.** Yunan, BAKER Bull. B.O.C. **38** p. 8.—*Baeolophus inornatus murinus* and *B. wollweberi annexus* (Cassin) readily recognizable races, OBERHOLSER **431** p. 323.

Parus major quelpartensis **subsp. n.** Quelpart I. Corea, KURODA Tori No. 5 p. 3 pl vi figs. 1–2.

[*Pentheres*] *Parus thruppi* note on, in East Africa, MACKWORTH-PRAED **374** p. 377.

[*Cyanistes*] *Parus flavipectus* note on taxonomy, *P. f. carruthersi* **subsp. n.** Samarkand, HARTERT Bull. B.O.C. **38** p. 19.

FAM. REGULIDAE.

Rex or *Regillus* v. *Regulus* as the generic name for the Golden-crested Wren, MATHEWS & IREDALE **390** p. 119.

Sylviparus modestus simlaensis **subsp. n.** N.W. Himalaya, BAKER Bull. B.O.C. **38** p. 8.

FAM. SITTIDAE.

Sitta geographical distribution, DOMANEWSKI **166**.—*S. europaea homeyeri* and its allied forms discussed, DOMANIEWSKI **164**. *S. caesia sordida* status discussed, REICHENOW **499**.—*S. cinnamomeiventris* asymmetry in the bill, MARTORELLI **378**.—*S. carolinensis cookei* **subsp. n.** N.E. U.S.A. and S.E. Canada (= *S. c. carolinensis* auctt. *nec* Lath.) p. 185, *S. c. carolinensis* applies to the S.E. U.S.A. race, OBERHOLSER Auk **34** p. 181.

FAM. CERTHIIDAE.

Certhia familiaris song and other characteristics of the German races, HEGER **229**. — *C. brachydactyla lusitanica* **subsp. n.** Portugal, REICHENOW J. Ornith. 1917 p. 97.

Climacteris minor egg from N. Queensl. described, H. L. WHITE **675** p. 164.—*C. waitei* **sp. n.** S. Australia, WHITE Emu. **16** p. 168; figured in colour with notice, WHITE **688**.

FAM. ZOSTEROPIDAE.

Zosterops abyssinica arabs distinctive characters, SCLATER **563** p. 153.—*Z. palpebrosa ijimae* **subsp. n.** Tsushima and Korea, KURODA Tori No. 5 p. 4 pl. vi fig. 3 text fig. 2.—*Z. solombensis* **sp. n.** Solombo Besar I. Java Sea, OBERHOLSER P. U.S. Nat. Mus. **54** p. 188.—

Z. solombensis zachlora **subsp. n.** Pulo Kalamban Laurot Is. Java Sea, OBERHOLSER P. U.S. Nat. Mus. **54** p. 199.—*Z. bayeri* **sp. n.** Londiani Bt. E. Afr. LÖNNBERG Ark. Zool. **11** No. 5 p. 3.

FAM. DICAEIDAE.

Dicaeum trigonostigmum hypochloum **subsp. n.** Anamba Is., OBERHOLSER Bull. U.S. Nat. Mus. No. **98** p. 67.

FAM. NECTARINIIDAE.

Nectarinia melanogaster nectarinioides and *N. erythrocerca* in East Africa taxonomic and other notes, MACKWORTH-PRAED **374** p. 375.

Aethopyga seheriae the subspecies and the Tonkinese form, KURODA **339** p. 249.—*A. s. tonkinensis* **subsp. n.** Tonkin, HARTERT Bull. B.O.C. **38** p. 7.—*A. siparaja ochropyrrha* **subsp. n.** Anamba Is., OBERHOLSER Bull. U.S. N. Mus. No. **98** p. 65.

Cinnyris abessinicus hellmayri distinctive characters, SCLATER **563** p. 152.—*C. brasiliana eumecis* **subsp. n.** Anamba Is., OBERHOLSER Bull. U.S. Nat. Mus. No. **98** p. 63.

Anthreptes hypogrammica intensior **subsp. n.** Borneo, HARTERT Bull. B.O.C. **38** p. 27.—*A. malaccensis* additional note on races, HARTERT **249.**—*A. m. anambae* **subsp. n.** Anamba Is., OBERHOLSER Bull. U.S. N. Mus. No. **98** p. 61.—*A. m. baweanus* **subsp. n.** Bawean I. Java Sea, OBERHOLSER P. U.S. N. Mus. **52** p. 196.

FAM. MELIPHAGIDAE.

Melithreptus atricapillus mallee nest and eggs, HOWE **296.**

Myzomela rubatra saffordi **subsp. n.** Guam, Marianne Is. WETMORE Proc. Biol. Soc. Wash **30** p. 117.—*M. eichhorni interposita* **subsp. n.** Rendova Solomon Is., ROTHSCHILD & HARTERT Bull. B.O.C. **37** p. 38.

Certhionyx variegatus nest and eggs figured, S. A. WHITE **684** p. 464 pl. xxxi fig. 2.

Ptilotis albilineata **sp. n.** Northern Terr. Australia, H. L. WHITE Emu **16** p. 165 figured on plate xlv.—*Tricodere cockerelli jardinei* **subsp. n.** N. Queensl., MATHEWS Austr. Av. Rec. **3** p. 71.

Xanthotis flaviventer watsoni **subsp. n.** N. Queenl., MATHEWS Austr. Av. Rec. **3** p. 71.

FAM. MNIOTILTIDAE.

Vermivora leucobronchialis occurrences in Massachusetts, FAXON **182.**—*V. c. celata* a winter visitor in the Boston neighbourhood, WRIGHT **702.**—*V. celata orestera* is a distinguishable race from the Rocky Mountains region, OBERHOLSER **431** p. 326

Dendroica petechia albicollis (Gmel.) is a distinct Haitian form, PETERS **476** p. 421; also BARTSCH Proc. Biol. Soc. **30** p. 132.—*D. tigrina* breeding notes in Quebec Prov., MERRIAM **398.**—*D. coerulescens* breeding at Hatley, Quebec Prov., MOUSLEY **410.**—*D. c. cairnsi* is a distinguishable race, OBERHOLSER **431** p. 325.—*D. coronata* and other warblers, sap-drinking habits, MOUSLEY **412.**

Microligea montana **sp. n.** Prov. Azua S. Domingo, W.I., CHAPMAN Bull. Amer. Mus. **37** p. 330.

Geothlypis trichas brachydactyla (Swains.) is the earliest name for the northern race, OBERHOLSER **431** p. 324.—*G. beldingi goldmani* **subsp. n.** L. California, OBERHOLSER Condor **19** p. 183.

FAM. DREPANIDIDAE.

Telespiza ultima **sp. n.** Nihoa I., Hawaiian group, BRYAN Auk **34** p. 70.

FAM. MOTACILLIDAE.

Motacilla melanope breeding in Sweden, LAKJER, **343.**—*M. flava* subspecies in Holland, SNOUCKAERT **594.**

Anthus type should be *A. campestris*, MATHEWS & IREDALE Austr. Av. Rec. **3** p. 125.—*A. trivialis haringtoni* **subsp. n.** Hazara, N.W. India, WITHERBY Bull. B.O.C. **37** p. 44.—*A. sordidus arabicus* S. Arabia, *A. s. sokotrae* Sokotra **subspp. n.**, HARTERT Nov. Zool. **24** p. 457.—*A. campestris minor* breeding at Peshawar, WITHERBY **700.**—*A. rufulus cinnamomeus* and *A. leucophrys captus* recorded from Yemen, SCLATER **563** p. 150.—*A. s. spinoletta* in Thuringia and the Harz, FENK **184.**

FAM. ALAUDIDAE.

Alaemon alaudipes boavistae **subsp. n.** Cape Verde Is., HARTERT Bull. B.O.C. **37** p. 56.

Otocoris alpestris subspecies in Manitoba, CRIDDLE **145.**—*O. a. pratincola* and *O. a. alpestris* field notes in Quebec Prov., TERRILL **635.**

Melanocorypha c. calandra in Sussex, first record for Bt. Isles, NICHOLS **423.**—*M. yeltonensis* in Middlesex in 1737, CLARKE **131.**

Alauda arvensis carrying away young from nest, HESSE **279.**—*A. a. kiborti* **subsp. n.** Siberia? ZALIESSKI Mess. Ornith. **8** p. 125.

Mirafra africanoides harei **subsp. n.** Windhuk Damaraland, ROBERTS Ann. Transvaal Mus. **5** p. 258.

Galerida cristata forms occurring in the Nile Valley, HARTERT **252.**

Pyrrhulauda leucotis nesting in captivity, BAILEY **34.**

FAM. FRINGILLIDAE.

Hesperiphona vespertina revision of subspecies, *H. v. brooksi* Bt. Columbia p. 20. *H. v. californica* California p. 20, *H. v. warreni* Colorado p. 21 **subspp. n.** GRINNELL Condor **19.**

Guiraca caerulea chiapensis eggs and nest near Tehuantepec, Mexico, SHUFELDT **577.**

Oryzoborus torridus breeding in captivity, BLAAUW **65.**—*O. angolensis brevirostris* nest and eggs described with photo. BEERE **51** p. 237.

Sporophila castaneiventris and *S. bouvronides* nest and eggs described with photo., BEEBE **51** p. 239.—*S. lineola restricta* **subsp. n.** Magdalena Colombia, TODD Proc. Biol. Soc. Washington **30** p. 128.

Catamenia inornata dimensions of races, CHAPMAN **118** p. 559.

Idiospiza **gen. n.** for type *Linaria* [now *Catamenia*] *inornata* Lafres., TODD Proc. Biol. Soc. **30** p. 127.

Fringilla coelebs discussion of groups and subspecific forms, GENGLER **203**; food habits and economics, THEOBALD, MCGOWAN & LEIGH **636.**—*F. montifringilla* in Sweden in winter, GRANVIK **214.**

Carduelis carduelis albinism and melanism, POLIAKOV **486.**

Spinus symonsi **sp. n.** Basutoland, ROBERTS Ann. Transvaal Mus. **5** p. 257.

Astragalinus psaltria columbianus note on diversity of tail coloration, CHAPMAN **118** p. 564.

[*Linaria*] *Acanthis linaria rufescens* breeding in Austria, WATZINGER **663.**

Pseudacanthis yemenensis figured in colour with text fig. of wing and tail, SCLATER **563** p. 145 pl. iv. fig. 1.

Onychostruthus **nom. n.** pro *Onychospiza* Prjev. 1876 preoccupied by *Onychospiza* Rey 1872 type *O. taczanowskii* which latter antedates *Montifringilla mandelli* Hume, RICHMOND **508.**

Rhynchostruthus percivali yemenensis further description, SCLATER **563** p. 142.

[*Petronia*] *Passer petronius* recent occurrences in Germany, LINDNER **352.**—*P. dentata* in S. Arabia, SCLATER **563** p. 143.

Passer domesticus hostilis Kleinschmidt is the correct designation of the Sparrow in the U.S.A., OBERHOLSER **431** p. 329.—*P. d. burgi* note on, SCLATER **563** p. 143.

Serinus serinus in Westphalia, HENNEMANN **269.**—*S. canarius* on the hybrids, BRAUN **83.**—*S. rothschildi*=*S. uropygialis* (Heugl.), SCLATER **563** p. 144.

Anomalospiza imberbis parasitic on *Prinia flavicans*, ROBERTS **521** p. 259 text fig. p. 246.

Sycalis taxonomic notes, REICHENOW **497.**

Carpodacus erythrinus in Pomerania, KOSKE **335**; in West Prussia? IBARTH **302.**

Loxia curvirostra moults and plumage changes, TISCHLER **643.**—*L. c. bendirei* must be recognised as a distinct race, OBERHOLSER **431** p. 328.—*L. megaplaga* additional examples secured and geographical relations commented on in S. Domingo, CHAPMAN **119** p. 331.

Pyrrhula pyrrhula nesa **nom. n.** pro *P. p. pileata* the British Bullfinch, MATHEWS & IREDALE Austr. Av. Rec. **3** 1917 p. 122.—*P. uchidai* **sp. n.** Formosa, KURODA Annot. Zool. Jap. **9** p. 295.

Pinicola enucleator kamtschathensis in the Pribilofs a new American record, RILEY **515.**

[*Emberiza*] *Cynchramus* species found in Turkestan, SARUDNY **543.**—*C. citrinella* and *E. leucocephala* taxonomic relations, KLEINSCHMIDT **325.**—*E. cirlus* in N.E. France, BACMEISTER **29.**—*E. cinerea semenowi* sexual distinctions and occurrence in Yemen, SCLATER **563** p. 146.

Fringillaria striolata and *F. arabica* synonymy and taxonomic note, SCLATER **563** p. 147.

[*Plectrophenax*] *Passerina nivalis* in Croatia, SCHIEBEL **551.**

[*Coturniculus*] *Ammodramus savannarum borinquensis* **subsp. n.** Porto Rico, PETERS Proc. Biol. Soc. Wash. **30** p. 95.—*A. s. australis* song, ALLARD **7.**

[*Ammodromus*] *Passerherbulus* revision and generic arrangement of species, OBERHOLSER **437.**

Nemospiza **gen. n.** for type *Passerherbulus henslowii* (Aud.), OBERHOLSER Ohio J. Sci. **17** p. 335.

Thyrospiza **gen. n.** for type *Passerherbulus maritimus* (Wilson), OBERHOLSER Ohio J. Sci. **17** p. 332.

[*Haemophila*] *Myiospiza humeralis meridanus* **subsp. n.** Venezuela, TODD Proc. Biol. Soc. Washington **30** p. 127.

Brachyspiza capensis antillarum addt. account and description, CHAPMAN **119** p. 333.

Passerella iliaca monoensis **subsp. n.** California, GRINNELL & STORER Condor **19** p. 165.

Pseudochloris citrina antioquiae **subsp. n.** Colombia, CHAPMAN Bull. Amer. Mus. **36** p. 571.

Atlapetes flaviceps and *A. fuscoolivaceus* from Colombia figured in colour, CHAPMAN **118** p. 574 pl. 40.

FAM. CŒREBIDAE.

Coereba aterrima of the Lesser Antilles, taxonomy and synonymy, HELLMAYR **265** p. 197.

Diglossopis caerulescens note on distribution, HARTERT & GOODSON **257** p. 494.—*D. c. saturata* **subsp. n.** Santander, Colombia, TODD Proc. Biol. Soc. Washington **30** p. 128.

[*Dacnis*] *Ateleodacnis speciosa amazonum* **subsp. n.** Peru, HELLMAYR München Verh. Orn. Ges. **13** p. 106.

Cyanerpes c. cyaneus nest and eggs described with photo., BEEBE **51** p. 241. —*Arbelorhina* (= *Cyanerpes*) remarks and identifications of Cabanis' species of this genus, HELLMAYR **265** p. 193.

FAM. TANAGRIDAE.

[*Euphonia*] *Tanagra xanthogastra* measurements of Colombian subspecies, CHAPMAN **118** p. 588.

[*Calospiza*] *Calliste cyanopygia* figured with notice, BUTLER **104.**—*Tangara gyroloides* races revised, *T. g. nupera* **subsp. n.** western Ecuador, BANGS Proc. N. Engl. Zool. Cl. **6** p. 76.—*Tangara lutleyi* **nom. n.** pro *Calliste melanotis* Scl., HELLMAYR München Verhandl. Orn. Ges. **13** p. 198.

Compsocoma notabilis figured with notice, BUTLER **104.**

Sporothraupis cyanocephala hypophaea **subsp. n.** Venezuela, TODD Proc. Biol. Soc. Washington **30** p. 128.

Ramphocelus chrysonotus a hybrid of *R. icteronotus* × *R. flammigerus* with map of ranges, CHAPMAN **118** p. 610.

Piranga r. rubra not *P. r. cooperi* occurs in Colorado, OBERHOLSER **444.**

Phoenicothraupis rubiginosus **sp. n.** Bolivar Colombia, TODD Proc. Biol. Soc. Wash. **30** p. 3.

Thlypopsis fulviceps intensa **subsp. n.** Santander Colombia, TODD Proc. Biol. Soc. Washington **30** p. 128.

FAM. PLOCEIDAE.

The classification of the Weaver Birds and their structural and diagnostic characters, CHAPIN **113.**

Avicult. and other notes on Whydahs (Viduinae), HOPKINSON **292**.

Vidua serena, parasitic habits, ROBERTS **521** p. 259.

Munia atricapilla occurrence in Australia ? MATHEWS **389** p. 180.

[*Poëphila*] *Neopoëphila personata watsoni* **subsp. n.** N. Queensl., MATHEWS Austr. Av. Rec. **3** p. 71.

Textor niger on the so-called penis, HARTERT **242**.

Malimbus coronatus and *M. cassini* female and immature plumages, O. GRANT **451** p. 75.

[*Sycobrotus*] *Ploceus quilimanensis*, Quilimane, *P. epipolius* G.E. Afr. and *P. pondoensis* Pondoland **spp. n.**, REICHENOW J. Ornith. **1917** p. 392.

[*Phormoplectes*] *Heterhyphantes preussi*, *H. insignis* and *H. dorsomaculatus*, heads figured with taxonomic notes, O. GRANT **451** p. 72.

FAM. ICTERIDAE.

Ostinops decumanus melanterus Santa Marta, Colombia, *O. sincipitalis australis* Bolivia **subsp. n.**, TODD Proc. Biol. Soc. Wash. **30** p. 3.

Molothrus ater artemisiae Grinnell is a distinguishable race, OBERHOLSER **431** p. 327.—*M. badius bolivianus* **subsp. n.** Bolivia, HELLMAYR München Verhandl. Orn. Ges. **13** p. 108.

Agelaius phoeniceus grinnelli **subsp. n.** Salvador, C. Amer., HOWELL Auk **34** p. 196.

Sturnella neglecta confluenta **subsp. n.** Pacific coast region of Brit. Columbia, Washington and Oregon, RATHBURN Auk **34** p. 68.

Icterus chrysocephalus nest and egg described with photo., BEEBE **51** p. 243.—*I. mesomelas carrikeri* **subsp. n.** Santa Marta, Colombia, TODD Proc. Biol. Soc. Wash. **30** p. 4.

FAM. STURNIDAE.

Sturnus vulgaris, food habits and economics, THEOBALD, MCGOWAN & LEIGH **636**; a starling roost in Pennsylvania, MACREYNOLDS **377**.

FAM. EULABETIDAE.

[*Eulabes*] *Gracula javensis baweana* **subsp. n.** Bawean I., Java sea, OBERHOLSER P. U. S. N. Mus. **52** p. 195.—*G. javana prasiocara* **subsp. n.** Anamba Is., OBERHOLSER Bull. U.S.N. Mus., no. **98** p. 53.

Cinnyricinclus leucogaster new to S. Arabia, SCLATER **563** p. 140.

Aplornis cantoroides longipennis **subsp. n.** New Guinea, NEUMANN Orn. Monatsb. **25** p. 155.

Lamprocorax panayensis heterochlorus **subsp. n.** Anamba Is., OBERHOLSER Bull. U. S. Nat. Mus. no. **98** p. 57.

Hagiopsar tristrami hadramauticus from S. Arabia a distinct subspecies, SCLATER **563** p. 140.

Coccycolius iris distribution in West Africa, SNOUCKAERT **593**.

FAMILY ORIOLIDAE.

Oriolus maculatus lamprochryseus **subsp. n.** Solombo Besar I., Java sea, OBERHOLSER P. U. S. Nat. Mus. **54** p. 186.

FAM. DICRURIDAE.

Dicruropsis pectoralis solombensis **subsp. n.** Solombo Besar I., Java sea, OBERHOLSER P. U. S. Nat. Mus. **54** p. 184.—*D. p. sirensis* **subsp. n.** Pula Mata Siri I., Java sea, OBERHOLSER P. U. S. Nat. Mus. **54** p. 198.

Dissemurus paradiseus microlophus **subsp. n.** Anamba Is., OBERHOLSER Bull. U. S. Nat. Mus. no. **98** p. 59.

FAM. PARADISEIDAE.

Craspedophora magnifica claudia **subsp. n.** N. Queensl., MATHEWS Austr., Av. Rec. **3** p. 72.

Paradisea apoda in Little Tobago, W. Indies, INGRAM **303**.

FAM. CORVIDAE.

[*Trypanocorax*] *Corvus frugilegus*, food habits and economics, THEOBALD, MCGOWAN & LEIGH **636**; a blue-grey variation, BLAGG **67**; polygamous habits, DUNLOP **173**.

Corvus corone on the identity of Linnaeus' species, HELLMAYR **264**.—*C. c. interpositus* **subsp. n.** Japan, LAUBMANN München Verhandl. Orn. Ges. **13** p. 201.

Coloeus monedula soemmeringii (Fisch.) antedates *C. m. collaris*, HELLMAYR **264** p. 184.

Nucifraga caryocatactes, migration movements at Rossitten, Prussia, THIENEMANN **640**.—*N. columbiana* nesting habits in Colorado, BRADBURY **79**.

Pica pica hudsonia field-notes, DICE **158**.

Cyanopica cyanus interposita **subsp. n.** Corea and Manchuria, HARTERT Nov. Zool. **24** p. 493.

Celalyca Gray 1870 antedates *Laletris* Reichw. 1906 for *C. lanceolatus*, HELLMAYR **265** p. 198.

[*Cractes*] *Perisoreus obscurus rathbuni* **subsp. n.** N.W. Washington, OBERHOLSER Proc. Biol. Soc. Wash. **30** p. 185.

Aphelocoma cyanotis and *A. californica*, revision of subspecies, OBERHOLSER **435**.

Cyanolyca viridicyanea cuzcoensis **subsp. n.** eastern slopes of Peruvian Andes, SCLATER Ibis **1917** p. 465 pl. viii.—*C. v. cyanolaema* **subsp. n.** Peru, HELLMAYR München Verhandl. Orn. Ges. **13** p. 107.

XVIII. MAMMALIA

ARRANGED BY

MARTIN A. C. HINTON.

CONTENTS

PAGE

I. Titles 4

II. Subject Index :—

Comprehensive and General = 6003 :—

Treatises, Text-books 15
Institutions, Collections 15
Economics 15
Miscellaneous 15

Structure = 6007 :—

General and Comparative 15
Histology 15
Tegument 15
Nervous system and sense-organs 15
Myology 15
Osteology and Dentition... 15
Alimentary system 16
Circulatory and Respiratory Systems 16
Blood, Lymph, etc. 16
Excretory organs. Special glands 16
Organs of reproduction 16
Placenta 16

Physiology = 6011 :—

General and miscellaneous 16

PAGE

Development = 6015 :—
Ovum, oogenesis 16
Spermatozoon, spermatogenesis... 16
Embryology 16

Ethology = 6019 :—
General 16
Instinct, Mental Processes, Psychology 16
Habits 16
Seasonal changes, etc. 16

Variation and Ætiology = 6023 :—
Variation 16
Abnormalities 16
Hybrids 16
Heredity 16
Evolution 16

Geography = 6027 :—
Europe = *d* and *da* to *dk* 17
Scandinavia, etc. *da* 17
Russia European *db* 17
German Empire *dc* 17
Holland and Belgium *dd* 17
British Islands *de* 17
France *df* 17
Spain *dg*... 17
Italy *dh* 17
Switzerland *di* 17
Austria-Hungary *dk* 17
Mediterranean Islands *dm* 17

Asia = *e* 17
Asiatic Russia *ea* 17
China and Tibet *eb* 17
Japan and Korea *ec* 17
Cochin China, etc. *ed* 17
British India *ef*.. 17
Malaya, etc. *eg*... 17
Persia, Syria and Arabia *eh* and *ei* 17

Africa and Madagascar = *f* 17
North America = *g* 17
Central and South America, Antilles = *h* 18
Australasia and Southern Ocean = *i* 18

III. Systematic = 6031 :—
Primates 18
A. Anthropoidea 18
Hominidae and Simiidae 18
Cercopithecidae 18
Cebidae and Hapalidae 18
B. Lemuroidea 19

PAGE

Chiroptera 19
Vespertilionidae 19
Rhinolophidae, Hipposideridae and Nycteridae ... 19
Molossidæ and Phyllostomidae 19

Insectivora 20
Tupaiidae and Macroscelididae 20
Soricidae and Talpidae 20
Nesophontidae 21
Centetidae and Chrysochloridae 21

Carnivora 21
A. Carnassidentia 21
Felidae... 21
Viverridae 21
Hyænidae and Proteleidae 21
Canidae 21
Ursidae 21
Procyonidae 21
Mustelidae 21

B. Pinnipedia 22

C. Creodontia 22

Rodentia 22
Sciuridae and Castoridae 22
Dipodidae, and Gliridae 22
Muridae 23
Spalacidae and Geomyidae 24
Hystricidae, Caviidae, etc. 24
Leporidae and Ochotonidae 25

Ungulata 25
A. Artiodactyla 25
Bovidae 25
Cervidae and Giraffidae 26
Camelidae 26
Hippopotamidae, Suidae, and Dicotylidae 26
Extinct Families 26

B. Perissodactyla 26
Equidae 26
Tapiridae and Rhinocerotidae 27
Extinct Families 27

C and D. Hyracoidea and Proboscidea 27
Sirenia and Cetacea... 27
Edentata 27
Marsupialia 27
Monotremata 28

I.—TITLES.

Abe, Y. Echigo-usagi no kisetsuteki henshoku ni tsuite. [On the seasonal change of colour in *Lepus timidus* L.] Dobuts. Z. Tokyo **29** 1917 (201–209 226–233 269–276). **1**

Aguilar-Amat, J. B. d'. Instruccions per a la preparació i envio de mamifers amb destí al Museu. Barcelona Mus. Barcin. Sci. Nat. Op. ser. Zool. **1** 1917 (1–16). **2**

Airaghi, C. Sui molari d'elefante delle Alluvioni Lombarde con osservazioni sulla filogenia e scomparsa di alcuni Proboscidati. Milano Mem. Soc. ital. sc. nat. **8** 1917 (191–242) Tav. 3. **3**

Allen, G. M. The whalebone whales of New England. Boston Mass. Mem. Soc. Nat. Hist. **8** 1916 (107–322) 9 pls. **4**

Allen, G. M. New fossil mammals from Cuba. Cambridge Mass. Bul Mus. Comp. Zool. Harvard Coll. **61** 1917 (3–12) pl. **5**

Allen, G. M. Two undescribed West Indian bats. Washington D.C. Proc. Biol. Soc. **30** 1917 (165–170). **6**

Allen, J. A. The skeletal characters of *Scutisorex* Thomas. New York Bull. Amer. Mus. Nat. Hist. **37** 1917 (769–784) pls. lxxxix–xcii text-figs. 1–8. **7**

Allen, J. A., **Lang,** H. and **Chapin,** J. P. The American Museum Congo Expedition collection of Bats. New York N.Y. Bull. Amer. Mus. Nat. Hist. **37** 1917 (405–563) 26 text-figs. & 12 pls. **8**

Allen, J. A. *vide* Elliot, D. G.

Alphéraky, S. Deformity of *Os penis* in a Seal (*Phoca caspica* Nilsson). London Proc. Zool. Soc. **1917** 1918 (251) text-fig. **9**

Andersen, A. C. *vide* Møllgaard, Holger.

Andersen, K. On the determination of age in Bats. Bombay J. Nat. Hist. Soc. **25** 1917 (249–259) plate. **10**

Andersen, K. On the so-called colour phases of the rufous Horseshoe-Bat of India (*Rhinolophus rouxi,* Temm.). Bombay J. Nat. Hist. Soc. **25** 1917 (260–273) pls. i–ii. **11**

Andrews, R. C. Whale hunting with gun and camera. A naturalist's account of the modern shore-whaling industry, of whales and their habits, and of hunting experiences in various parts of the world. D. Appleton & Co. New York & London 1916 xxii–333. **12**

Anthony, H. E. New fossil Rodents from Porto Rico, with additional notes on *Elasmodontomys obliquus* Anthony & *Heteropsomys insulans* Anthony. New York N.Y. Bull. Amer. Mus. Nat. Hist. **37** 1917 (183–189) pl. **13**

Anthony, H. E. A new Rabbit and a new Bat from Neotropical regions. New York N.Y. Bull. Amer. Mus. Nat. Hist. **37** (335–337) pl. **14**

Anthony, H. E. Two new fossil Bats from Porto Rico. New York Bull. Amer. Mus. Nat. Hist. **37** 1917 (565–568) pl. lvi. **15**

Anthony, R. Seconde note sur un procédé d'étude de l'architecture du tissu spongieux des os. Bul. Muséum Paris **22** 1916 (287–288). **16**

Anthony, R. La musculature de la nageoire pectorale du *Mesoplodon* et la marche de la regression des muscles de l'éxtremité antérieure chez les Cétacés. Arch. Zool. Expér. Paris **56** 1917 (359–374) text-figs. 1–7. **17**

Anthony, R. *vide* Boule, M.

Babault, G. Les moeurs des *Pteromys* de l'Inde. Bul. Muséum Paris **22** 1916 (430–432). **18**

Bailey, V. A new subspecies of meadow-mouse from Wyoming. Washington D.C. Proc. Biol. Soc. **30** 1917 (29–30). **19**

Bailey, V., **Bell,** W. B. and **Brannon,** M. A. Preliminary report on the mammals of North Dakota. Agric. Exp. Sta. North Dakota Agricultural College Cir. No. **3** 1914 (1–20). **20**

Barge, J. A. J. Over de ontwikkeling van de cranio-vertebraalgrens by het schaap. [Ueber die Entwicklung der Cranio-vertebralgrenze beim Schafe.] Amsterdam Werk. Ge ı. Nat. Genees. Heelk. **8** 1917 (636–639). **21**

Battaglia, R. Nota preliminare sul Paleolitico della Venezia Giulia. Padova Atti Acc. ven.-trent. (3) **8** (1915) 1916 (196–207). **22**

Baudet, F. Het conserveeren van gesensibiliseerde roode bloedlichaampjes van het schaap. [Das Conservieren sensibilisierter roter Blutkörperchen des Schafes.] Tydschrift vergelykende geneeskunde gezondheidsleer dierziekten Leiden **2** 1917 (304–309). **23**

Bell, A. A list of type and figured specimens in the geological gallery, Ipswich Museum. Ipswich J.F. Cl. **5** 1917 (Mammals 41–44). **24**

Bell, A. G. Sex-determination in sheep. J. Hered. Washington **5** 1914 (47–57 with ff. tables). **25**

Bell, W. B. *vide* Bailey, V.

Bespaloff, F. Beitrag zur Kenntnis des Elenhirns (*Cervus alces*). Folia neuro-biologica Haarlem **10** 1917 (159–203 5 Taf.). **26**

Boas, J. E. V. Vildtskade. On the damage caused in woods by deer. København Fra Naturens Vaerksted **5** 1916 (161–176) with 15 figg. **27**

Boas, J. E. V. Das Gehörn von Antilocapra und sein Verhältnis zu dem anderer Cavicornia und der Hirsche. København Kgl. Danske Vidensk. Selsk. Biologiske Meddelelser I **2** 1917 (1–23) with 2 plates and 4 figg. **28**

Bolam, G. Mice, voles and shrews. Vasculum Hexham **2** 1917 (98–104). **29**

Bolk, L. Anatomische Bemerkungen über einen Fetus von Elephas africanus. Amsterdam Verh. K. Akad. Wet. 2e. Sect. **19** No. 6 1917 (1–40 28 Textfig.). **30**

Booth, H. B. Bottle-nosed Dolphin (*Tursiops tursio*) caught off Walney Island. Naturalist London **1917** 1917 (300–301). **31**

Boule, M. and **Anthony,** R. Neopallial morphology of fossil men as studied from endocranial casts. J. Anat. London **51** 1917 (95–103). **32**

Boyd, M. M. Crossing bison and cattle. J. Hered. Washington **5** 1914 (189–197 with ff.). **33**

Boynton, W. H. A study of the normal blood of the carabao. Philippine J. Sci. Manila Sect. B Trop. Med. **8** 1913 (59–66 with tables). **34**

Boynton, W. H. Rinderpest in swine with experiments upon its transmission from cattle and carabaos to swine and vice versa. Philippine J. Sci. Manila **11** sect. B 1916 (215–263). **35**

Brannon, M. A. *vide* Bailey, V.

Brinkmann, A. Gorillaen. (The Gorilla). Bergen Naturen **41** 1917 (357–369) 5 text-figs. **36**

Brouwer, B. Ueber den Verlauf der Beinfasern in der Pyramidenbahn. Psychiatrische neurologische Bladen Amsterdam **1917** (99–110 4 pl.) **37**

Buhigas, R. S. *Balaenoptera borealis* Lesson (Nueva especie para la fauna Ibérica). Madrid Bol. Soc. Esp. Hist. Nat. **17** 1917 (231–234). **38**

Burne, R. H. Notes on some of the viscera of an Okapi (*Okapia johnstoni* Sclater). London Proc. Zool. Soc. **1917** 1917 (187–208) text-figs. 1–23. **39**

Burrell, H. The deposition of the eggs of Monotremes. Australian Zool. Sydney N.S.W. **1** 1917 (87). **40**

Büttikofer, J. Die Kurzschwanzaffen von Celebes. Zool. Meded. Leiden **3** 1917 (1–86) Taf. 12 map and 10 text-figs. **41**

Cabrera, A. Mamíferos del viaje al Pacífico verificado de 1862 a 1865 por una comisión de naturalistas enviada por el Gobierno Español. Madrid Trab. Mus. Nac. Ci. Nat. ser. Zool. Núm. **31** 1917 (1–62). **42**

Cabrera, A. Notas sobre el género "*Cebus.*" Madrid Revista Real Ac. Ci. Ex. Fis. Nat. **16** 1917 (1). **43**

Cabrera, A. Algunos nomina mutanda en los carnivoros. Madrid Bol. Soc. Esp. Hist. Nat. **17** 1917 (487–488). **44**

Cabrera, A. Dos ardillas exóticas nuevas. Madrid Bol. Real. Soc. españ. Histor. Nat. **17** 1917 (516–519). **45**

Caldwell, George T. *vide* Wells, H. G.

Calonne-Beaufaict, A. de. Note sur les phases de couleur chez *Cobus defassa* et *Bos caffer* de la region de l'Uele. Rev. Zool. Africaine Bruxelles **4** 1916 (183–190). **46**

Calvet, L. Sur un cas d'atrophie de la veine cave supérieure droite chez le mouton. Paris Bul. Soc. Zool. **42** 1917 (81–85). **47**

Camerano, L. Contributo allo studio dei Wormiani palato palatini e dei Wormiani medio palatini di Calori nei mammiferi. Torino Boll. Musei Zool. anat. **30** 1915 No. 706 (1–8) Tav. 1–4. **48**

Camerano, L. Osservazioni intorno alla bipartizione del lacrimale nei mammiferi ungulati artiodattili. Torino Boll. Musei zool. anat. **30** No. 707 1915 (1–7) tav. 1–4. **49**

Camerano, L. Materiali per lo studio della partizione del nasale nei mammiferi Ungulati artiodattili e nei Carnivori. Torino Boll. Musei zool. anat. **31** No. 709 1916 (1–4) Tav. 1–3. **50**

Camerano, L. Ricerche intorno all' "*os supramaxillare accessorium*" di Vrolik, alla partizione dell' intermascellare, e sulle ossificazioni che si trovano nella fontanella maxillo nasale dei mammiferi Ungulati artiodattili e in alcuni Carnivori. Torino Boll. Musei zool. anat. **31** No. 710 1916 (1–16) tav. 1–7. **51**

Camerano, L. Osservazioni intorno alla *Rupicapra rupicapra parva,* Cabrera. Torino Boll. Musei zool. anat. **31** No. 712 1916 (1–4). **52**

Camerano, L. Contributo allo studio degli Stambecchi Iberici. Torino Boll. Musei zool. anat. **32** 1917 No. 720 (1–30) tav. 1–2. **53**

Camerano, L. Ricerche intorno alle sottospecie della *Capra sibirica* Meyer. Torino Boll. Musei zool. anat. **32** No. 722 1917 Parte I No. 722 (1–41) Parte II No. 723 (1–19) tav. 1–2. **54**

Camerano, L. La forma delle nodosità delle corna e il sistema di colorazione nei sottogeneri "Euibex" ed "Eucapra" Camer. Torino Atti Acc. sc. **52** 1917 (231–236). **55**

Carpenter, G. H. Some notes on the Dublin Gorilla. Irish Nat. Dublin **26** 1917 (125–130). **56**

Carr, H. Principles of selection in animal learning. Psych Rev. Princeton N.J. **21** 1914 (157–165). **57**

Carter, T. The cytomorphosis of the marsupial enamel-organ and its significance in relation to the structure of the completed enamel. London Phil. Trans. R. Soc. ser. B. **208** 1917 (271–305) 4 pls. **58**

Cary, M. Life zone investigations in Wyoming. Washington D.C. U.S. Dept. Agric. Bur. Biol. Surv. N. Amer. Fauna **42** 1917 (1–95) 17 text-figs. map & 14 pls. **59**

Chapin, J. P. *vide* Allen, J. A.

Chapman, F. New or little-known Victorian fossils in the National Museum. Part XXI. Some Tertiary Cetacean remains. Melbourne Proc. R. Soc. Vict. **30** 1917 (32–43) 2 pls. **60**

Charlton, H. H. The fate of the unfertilised egg in the white mouse. Biol. Bull. Wood's Hole Mass. **33** 1917 (321–332). **61**

Chenoweth, H. E. The reactions of certain moist-forest mammals to air conditions and its bearing on problems of mammalian distribution. Biol. Bull. Wood's Hole Mass. **32** 1917 (183–201). **62**

Chubb, E. C. A new Bat of the genus *Otomops,* obtained at Durban. Ann. Durb. Mus. **1** 1917 (433) 2 pl. Durban **63**

Chubbs, S. H. Celtic and Norse Horses; new accessions to the *Equidae* Collection. New York N.Y. Zool. Soc. Bul. **20** 1917 (1449–1453). **64**

Clarke, W. Eagle. Wild Life in a West Highland deer forest. Scot. Nat. Edinburgh **1917** (255–264 279–283). **65**

Copeland, M. and **Pope,** A. S. Notes on Maine Mammals. Washington D.C. Proc. Biol. Soc. **30** (159–160). **66**

Costa, A. C. da. Origine et développement de l'appareil surrénal et du système nerveux sympathique chez les Chéiroptères. Lisbonne Mem. Soc. Port. Sc. Nat. **4** 1917 (1–102) pls. 5 text-figs. 13. **67**

Coward, T. A. Notes on the vertebrate fauna of Cheshire and South Lancashire. Lancs. Nat. **10** 1917 (Mammals 187–189). **68**

Criddle, Stuart. Note on a wounded [castrated] deer. Ottawa Nat. **29** Ottawa 1915–16 (32). **69**

Deichmann, E. Hvorledes fortaerer en Muldvarp sine Regnorme? How does the mole eat earth-worms? København Nath. Medd. **68** 1917 (209–210). **70**

Depéret, C. Monographie de la faune de mammifères fossiles du Ludien Inférieur d'Euzet-les-Bains (Gard). Ann. Univ. Lyon. Fasc. **40** 1917 (1–288) 27 pls. and 3 figs. **71**

Detlefsen, J. A. Genetic studies on a cavy species cross. With a Prefatory note by W. E. Castle. Washington (Carnegie Inst. Pub. No. **205**) 1914 (134 with pls. ff. tables). **72**

Dice, L. R. Distribution of the land vertebrates of South-eastern Washington. Berkeley Univ. Cal. Pub. Zool. **16** 1916 (293–348). **73**

Dixon, J. Home Dressing of furs and skins. New York N.Y. Forest & Stream **1917** (308–309). **74**

Dixon, J. Control of the California Ground Squirrel. Berkeley Univ. Cal. Pub. Agric. Exp. Sta. Circ. No. **181** 1917 (1–14) 3 text-figs. **75**

Dixon, J. and de **Ong,** E. R. Control of the Pocket Gopher in California. I. Natural History of the Pocket Gopher; various methods of control (Dixon): II. A method of poisoning Pocket Gophers (de Ong). Berkeley Univ. Cal. Pub. Bul. Coll. Agric. Exp. Sta. No. **281** 1917 (1–15) 4 text-figs. **76**

Duckworth, W. L. H. A note on some charts representing the relations of cranial length and breadth. J. Anat. London **51** 1917 (376–391). **77**

Dürst, J. U. Die Vererbung von Missbildungen und Krankheiten mit besonderer Berücksichtigung eigener Züchtungsversuche. Zürich Vierteljahrschr. Natf. Ges. **58** 1913 (1914) (xxx–xxxi). **78**

Elliot, D. G. A check-list of mammals of the North-American continent, the West Indies and the neighbouring seas. Supplement (edited by J. A. Allen). New York N.Y. Amer. Mus. Nat. Hist. 1917 (iv–192). **79**

Ewart, J. C. Studies on the development of the horse. 1. The development during the third week. Edinburgh Trans. R. Soc. **51** 1917 (287–329). **80**

Ewart, C. *vide* Moir, J. R.

Fantuzzi, A. Note zootecniche. Agricolt. Ticinese Lugano **42** 1910 No. 23. **81**

Fawcett, E. The primordial cranium of *Microtus amphibius* (Water-rat), as determined by sections and a model of the 25-mm. stage. With comparative remarks. J. Anat. London **51** 1917 (309–359) 4 text-figs. and 10 pls. **82**

Franca, C. Le Bouquetin du Gerez (*Capra lusitanica*); notes sur une espèce éteinte. Lisboa Arquiv Univers. **4** 1917 (19–54) 10 pls. **83**

Fuente, J. Ma. de la. Enumeración de las especies zoológicas que han sido descritas por primera vez sobre ejemplares procedentes de la provincia de Ciudad Real. Madrid Bol. Soc. Esp. Hist. Nat. **17** 1917 (Mammals 278). **84**

Garcia, A. Congenital bilateral absence of kidneys in a 140-millimetre pig-embryo. Philippine J. Sci. Manila **11** sect B. 1916 (191–199). **85**

Gianettoni, C. Alcune note zootecniche sull'allevamento delle capre. Agricolt. Ticinese Lugano **40** 1908 No. 18–24 30–33 38–40 42–45 47. **86**

Gianettoni, C. Ancore sulla questione della selezione e dell'incrocio nel miglioramento delle capre ticinese. Agricolt. Ticinese Lugano **40** 1908 No. 23. **87**

Gianettoni, C. Ancore sulla precocitè ed ete dei riproduttori: Consanguineita. Agricolt. Ticinese Lugano **40** 1908 No. 35–36. **88**

Gianettoni, C. Noterelle caprine. Agricolt. Ticinese Lugano **41** 1909 No. 42 **42** 1910 No. 6 7 8 16. **89**

Gianettoni, C. Lo sviluppo dell'arte e delle scienza zootecnica. Agricolt. Ticinese Lugano **42** 1910 No. 33. **90**

Gibson, A. *vide* Robinson, A.

Gidley, J. W. Notice of a new Paleocene mammal, a possible relative of the Titanotheres. Washington D.C. Smithsonian Inst. Nation. Mus. Proc. **52** 1917 (431–435). pl. **91**

Goldman, E. A. New mammals from North and Middle America. Washington D.C. Proc. Biol. Soc. **30** 1917 (107–116). **92**

Goldman, E. A. Two new pocket mice from Wyoming. Washington D.C. Proc. Biol. Soc. **30** 1917 (147–148). **93**

Goodnight, C. My experience with bison hybrids. J. Hered. Washington **5** 1914 (197–199 with fig.). **94**

Grinnell, J. Field tests of theories concerning distributional control. Amer. Nat. New York N.Y. 1917 **51** (115–128). **95**

Grinnell, J. and Storer, T. I. The Yosemite Cony—a chapter in the Natural History of the Yosemite National Park. San Francisco Bul. Sierra Cl. **10** 1917 (159–164) pl. **96**

Groot, J. G. de. Untersuchung über Blutbildung bei *Tupaja javanica* (und anderen Säugetieren) in dem trächtigen Uterus. Utrecht. (J. van Druten) 1916 (24 1 Taf.). **97**

Gunther, R. T. Report on Agricultural Damage by Vermin and Birds in the counties of Norfolk and Oxfordshire in 1916. 8vo. Oxford 1917. **98**

Gyldenstolpe, N. On Birds and Mammals from the Malay Peninsula. Ark. Zool. Stockholm **10** No. 26 1917 (Mammals 24–31). **99**

Haagner, A. K. On the variability in the nature or temperament of wild animals in captivity, with special reference to South African species. Hamlyn's Menag. Mag. London **3** 1917 (4–6). **100**

Hagedoorn, A. C. *vide* Hagedoorn, A. L.

Hagedoorn, A. L. en Hagedoorn, A. C. Rattensoorten. [Rattenarten.] Teysmannia Batavia **28** 1917 (1–23). **101**

Halnan, E. T. *vide* Marshall, F. H. A.

Hammond, J. On the causes responsible for the developmental progress of the mammary glands in the rabbit during the latter part of pregnancy. London Proc. R. Soc. ser. B **89** 1917 (534–545). **102**

Hance, R. T. The diploid chromosome complexes of the pig (*Sus scrofa*) and their variations. J. Morph. Philadelphia Pa. **30** 1917 (155–222). **103**

Harmer, S. F. Report on *Cetacea* stranded on the British Coasts during 1916 (with one text-figure and one map). London British Museum (Nat. Hist.) **1917** (1–13). **104**

Hay, O. P. Description of a new species of Mastodon, *Gomphotherium elegans*, from the Pleistocene of Kansas. Washington D.C. Smithsonian Inst. Nation. Mus. Proc. **53** 1917 (219–221) pl. **105**

Hay, O. P. Description of a new species of extinct Horse, *Equus lambei*, from the Pleistocene of Yukon Territory. Washington D.C. Smithsonian Inst. Nation Mus. Proc. **53** 1917 (435–443) 3 pls. **106**

Haynes, W. Inbreeding in dogs. J. Hered. Washington **5** 1914 (368–369). **107**

Hays, Grace P. A case of a syndactylous cat. J. Morph. Philadelphia Pa. **30** 1917 (65–82). **108**

Helbing, H. Zur Kenntnis einiger Carnivoren aus dem Phryganidenkalk des Allierbeckens. Basel Verh. Natf. Ges. **28** 1917 (439–461). **109**

Hescheler, K. Ueber einen Unterkiefer von *Rhinoceros antiquitatis* Blumenb. aus dem Kanton Schaffhausen. Zürich Vierteljahrsch. natf. Ges. **62** 1917 (319–326). **110**

Hollister, N. Some effects of environment and habit on captive lions. Washington D.C. Smithsonian Inst. Nation. Mus. Proc. **53** 1917 (177–193) pls. xxii–xxv. **111**

Holmes, H. F. *vide* Slye, M.

Howell, A. H. Description of a new race of Say's Ground Squirrel from Wyoming. Washington D.C. Proc. Biol. Soc. **30** 1917 (105–106). **112**

Hulshoff Pol, D. J. De ontwikkeling der Fossa Sylvii by *Semnopithecus*-embryo's. [The development of the

Fossa Sylvii in embryos of *Semnopithecus.*] Amsterdam Versl. Wis. Nat. Afd. K. Akad. Wet. **25** 1917 (984–990 6 Textfig.) (Dutch); Amsterdam Proc. Sci. K. Akad. Wet. **19** 1917 (938–943 6 fig.) (English). **113**

Hulshoff Pol, D. J. De aapspleet by *Semnopithecus.* [Die Affenspalte bei *Semnopithecus.*] Amsterdam Werk. Gen. Nat. Genees. Heelk. **8** 1917 (630–632). **114**

Iwanow, E. Le processus d'ejaculation du sperme chez les animaux domestiques (cheval, chien). Paris C. R. soc. biol. **80** 1917 (230–233). **115**

Iwanow, E. Le sperme de quelques mammifères. Paris C. R. soc. biol. **80** 1917 (233–235). **116**

Iwanow, E. Observations sur le processus d'ejaculation du sperme chez le chien. Durée et volume des differentes portions de la secretion spermatique. Paris C. R. soc. biol. **80** 1917 (514–516). **117**

Iwanow, E. Facteurs qui agissent sur le travail des glandes de l'appareil genital male du chien. Paris C. R. soc. biol. **80** 1917 (517–520). **118**

Iwanow, E. Moyen de rendre le sperme infecte des mammiféres incapable de transmettre l'infection. Paris C. R. soc. biol. **80** 1917 (765–767). **119**

Jackson, H. H. T. A new shrew from Nova Scotia. Washington D.C. Proc. Biol. Soc. **30** 1917 (149–150). **120**

Johnson, C. E. An additional case of pancreatic bladder in the domestic cat. Anat. Rec. Philadelphia **8** 1914 (267–270 with 1 fig.). **121**

Jolly, W. A. The electro-motive changes accompanying activity in the mammalian ureter. Cape Town Trans. R. Soc. S. Africa **6** 1917 (227–230). **122**

Jones, F. W. The genitalia of *Tupaia.* J. Anat. London **51** 1917 (118–127). **123**

Jones, F. W. The structure of the orbito-temporal region of the skull of *Lemur.* London Proc. Zool. Soc. **1917** 1918 (323–329) 5 text-figs. **124**

Jones, F. Wood. Effect of captivity on the cranial form of the Lion. London Proc. Zool. Soc. **1917** 1918 (333). **125**

Jordan, H. E. The spermatogenesis of the Mongoose; and a further comparative study of mammalian spermatogenesis, with special reference to sex chromosomes. Washington D.C. Carnegie Inst. Tortugas Lab. Papers **5** 1914 (165–180). **126**

Kingery, H. M. Oogenesis in the white mouse. J. Morph. Philadelphia Pa. **30** 1917 (261–315). **127**

Kingsley, J. S. Outlines of Comparative Anatomy of Vertebrates. 2nd ed. 8vo. Philadelphia **1917** (x + 449). **128**

Kloss, C. B. On a new mongoose from Siam. J. Nat. Hist. Soc. Siam Bangkok **2** 1917 (215–217). **129**

Kloss, C. B. Instructions for preparing mammal skins. J. Nat. Hist. Soc. Siam Bangkok **2** 1917 (232–246). **130**

Kloss, C. B. Description of a new macacque from Siam. J. Nat. Hist. Soc. Siam Bangkok **2** 1917 (247–249). **131**

Kloss, C. B. On a new Murine genus and species from Siam. J. Nat. Hist. Soc. Siam Bangkok **2** 1917 (279–281). **132**

Kloss, C. B. On five new mammals from Siam. J. Nat. Hist. Soc. Siam Bangkok **2** 1917 (282–287). **133**

Kloss, C. B. On a third collection of Siamese mammals. J. Nat. Hist. Soc. Siam Bangkok **2** 1917 (288–318). **134**

Kloss, C. B. On the Mongooses of the Malay Peninsula. J. Fed. Malay Mus. Kuala Lumpur **7** 1917 (123–125). **135**

Kloss, C. B. On two new Pygmy Shrews from the Malay Peninsula. J. Fed. Malay Mus. Kuala Lumpur **7** 1917 (127–128). **136**

Kloss, C. B. *vide* Thomas, O.

Krieg, H. Pferdestudien an der Ostfront. Zool. Anz. Leipzig **49** 1917 (197–205) 7 text-figs. **137**

Kuroda, N. Sen-Man san honyurui no shosaishubutsu ni tsuite. [On a small collection of mammals from Corea and Manchuria.] Dobuts. Z. Tokyo **29** 1917 (355–364). **138**

Landacre, F. L. Embryonic cerebral ganglia and the doctrine of nerve components. Folia neuro-biologica Haarlem **8** 1914 (601–615) 4 fig. **139**

Lang, H. *vide* Allen, J. A.

Lenze, Paul. Ein Beitrag zur Form und Formveranderung der Erythrocyten und ihr Verhältnis zu den Blutplättchen bei unsern Haustieren. Arnsvalde [1909] Bern vet. mer. Diss. (22). **140**

Lewis, T. Upon the motion of the mammalian heart. London Proc. R. Soc. ser. B **89** (560–573). **141**

Lillie, F. R. Sex-determination and sex-differentiation in mammals. Washington D.C. Proc. Nat. Acad. Sci. **3** 1917 (464–470). **142**

Little, C. C. Coat color in pointer dogs. J. Hered. Washington **5** 1914 (244–248 with table). **143**

Long, J. A. *vide* Pratt, B. H.

Luna, E. Sulle modificazioni dei plastosomi delle cellule nervose nel trapianto ed in seguito al taglio dei nervi. Folia neuro-biologica Haarlem **10** 1917 (3–17). **144**

Macdowell, E. C. Size inheritance in rabbits. With a prefatory note and Appendix, by W. E. Castle. Washington (Carnegie Inst. Pub. No. **196**) 1914 (55 with ff. tables). **145**

Mackenzie, W. C. Further studies on the peritoneum and intestinal tract in Monotremes and Marsupials. J. Anat. London **51** 1917 (278–292) 7 text-figs. **146**

Marett, R. R. The site, fauna, and industry of La Cotte de St. Brelade, Jersey. Archaeologia Oxford **67** 1916 (75–118) 2 pls. and 48 text-figs. **147**

Marshall, F. H. A. and **Halnan,** E. T. On the post-oestrous changes occurring in the generative organs and mammary glands of the non-pregnant dog. London Proc. R. Soc. ser. B **89** 1917 (546–559). **148**

Marshall, F. R. Holstein milk yield. J. Hered Washington **5** 1914 (437–439). **149**

McLean, J. A. The sapphire hog. J. Hered. Washington **5** 1914 (301–304 with fig.). **150**

Miguel de Barandiarán, J. Investigaciones prehistóricas en la diócesis de Vitoria. Zaragoza Bol. Soc. Arag. **16** 1917 (210–236). **151**

M'Intosh, *Prof.* On the skeleton of an adult female Small Finner or Piked Whale (*Balaenoptera acutorostrata,* Lacépède). London J. Zool. Research **2** 1917 (37–73) 5 pls. **152**

Moir, J. R. On some human and animal bones, flint implements, etc., discovered in two ancient occupation-levels in a small valley near Ipswich. London J. R. Anthrop. Inst. **47** 1917 (367–412). (Contains report on horse bones by C. Ewart at p. 379.) **153**

Møllgaard, Holger. Om Betydningen af nøjagtige Stofskifteforsøg for Udviklingen af en rationel Fodringslære for det malkende Kvæg. [The importance of exact experiments on the change of matter by milk-cows.] København Landbohøjskolens Forsøgslab. **94** 1917 (7–41). **154**

Møllgaard, Holger. Foreløbig Beretning om Resultater af Stofskifteforsøg med malkende Kvæg. [Preliminary report on some experiments on the change of matter by milk-cows.] København Landbohøjskolens Forsøgslab. **94** 1917 (137–147). **155**

Møllgaard, Holger and **Andersen,** A. C. Metodisk Redegørelse for et Pettenkofersk Respirationsapparat til Forsøg med malkende Kvæg. [The respiration apparatus of Pettenkofer used for experiments with milk-cows.] København Landbohøjskolens Forsøgslab. **94** 1917 (42–136) with 5 pls. and 12 figs. **156**

Møllgaard, Holger and **Andersen,** A. C. Metodisk og teknisk Redegørelse for et Pettenkofers Respirationsapparat til Forsøg med malkende Kvæg samt en foreløbig Beretning om Forsøgsresultaterne. [The respiration apparatus of Pettenkofer used for experiments with milk-cows and a preliminary report on the result of these experiments.] København Den. kgl. Veterinær- og Landbohøjskolens Aarsskrift **1917** (193–307) with 17 figs. **157**

Molo, [C.]. La questione della selezione e dell' incrocio nel miglioramento delle capre. Agricolt. Ticinese Lugano **40** 1908 No. 21. **158**

Molo, [C.]. Ancora sull' argomento della selezione e dell' incrocio nel miglioramento caprino. Agricolt. Ticinese Lugano **40** 1908 No. 24. **159**

Molo, [C.]. Osservazioni all' articola del Sig. Sianettoni sulle precocitè et etè dei riproduttori. Agricolt. Ticinese Lugano **40** 1908 No. 32. **160**

Molo, [C.]. Note zootecniche. Agricolt. Ticinese Lugano **41** 1909 No. 28. **161**

Mottram, J. C. and **Russ,** S. Observations and experiments on the susceptibility and immunity of rats towards Jensen's Rat sarcoma. London Proc. R. Soc. ser. B **90** 1917 (1–33). **162**

Mrázek, A. An appeal to American helminthologists [for information on the parasites of the muskrat]. The Journal of Parasitology Urbana Ill. **1** 1914 (104). **163**

Narbel, P. Présentation de crânes de rongeurs et de cas de développement anormal des incisives. C.R. Arch. Sci. Phys. Genève **38** 1914 (79–80). **164**

Neuville, H. *vide* Retterer, E.

Newton, E. T. Notes on the bones found in the Creag nan Uamh Cave, Inchnadamff, Assynt, Sutherland. Edinburgh Proc. R. Soc. **37** 1917 (344–349) pl. **165**

Newton, E. T. Mammalian remains, etc., from the Holderness gravels. Naturalist London **1917** 1917 (105). **166**

Nuttall, T. E. The Piltdown skull. Man London **17** 1917 (80–82). **167**

Ognev, S. I. [Огневъ, С. И.] Млекопитающіи Таврической губерніи, преимущественно крымскаго полуострова. Часть 1. Грызуны. [Mammalia of the Taurus Government, especially those of the Crimean Peninsula. Part I. Rodents.] Simferopol Bul. Soc. Nat. Crimée **5** 1916 (1–63) 4 pls. **168**

Ong, E. R. de *vide* Dixon, J.

Otten, L. Over de biologie van *Mus concolor*. [Ueber die Biologie von *Mus concolor*.] Batavia Geneesk. Tydschr. Ned. Ind. **57** 1917 (534–568); Weltevreden Med. Geneesk. Lab. Feestbundel **1917** (219–225); Buitenzorg Meded. Burg. Gen. Dienst Ned-Ind. **6** 1917 (82–119) (Dutch and English). **169**

Pan, I. del. Exploracion de la cueva prehistorica del Conejar (Caceres). Madrid Biol. Soc. Esp. Hist. Nat. **17** 1917 (185–190). **170**

Parker, Katharine M. The development of the hypophysis cerebri, preoral gut, and related structures in the Marsupialia. J. Anat. London **51** 1917 (181–249) 42 text-figs. **171**

Paterson, A. M. The action of the Biceps flexor cruris. J. Anat. London **51** 1917 (362–363). **172**

Petronievics, B. On the skull of *Tritylodon longaevus*, Owen. Ann. Mag. Nat. Hist. London **20** 1917 (283–289) pl. **173**

Pitt, Frances. Some notes and observations on the mole in captivity. Scot. Nat. Edinburgh **1917** 1917 (207–213 231–234). **173a**

Pocock, R. I. On the external characters of the *Felidae*. Ann. Mag. Nat. Hist. London **19** 1917 (113–136). **174**

Pocock, R. I. The Lemurs of the *Hapalemur* group. Ann. Mag. Nat. Hist. London **19** 1917 (343–352). **175**

Pocock, R. I. The groups of the small and medium-sized South-American *Felidae*. Ann. Mag. Nat. Hist. London **20** 1917 (43–47). **176**

Pocock, R. I. A new genus of *Ursidae*. Ann. Mag. Nat. Hist. London **20** 1917 (128–130). **177**

Pocock, R. I. The genera of *Hapalidae* (Marmozets). Ann. Mag. Nat. Hist. London **20** 1917 (247–258). **178**

Pocock, R. I. The classification of existing *Felidae*. Ann. Mag. Nat. Hist. London **20** 1917 (329–350). **179**

Pocock, R. I. Work of the Beavers in the Society's Gardens. London Proc. Zool. Soc. **1917** 1917 (100–103) text-fig. **180**

Pope, A. S. *vide* Copeland, M.

Pratt, B. H. and **Long,** J. A. The period of synopsis in the egg of the White Rat, *Mus norvegicus albinus*. J. Morph. Philadelphia Pa. **29** 1917 (441–459) pl. & 2 text-figs. **181**

Pycraft, W. P. The jaw of the Piltdown man, a reply to Mr. Gerrit S. Miller. Sci. Prog. London **11** 1917 (389–409) pl. & 4 text-figs. **182**

Rabaud, É. Telegony. J. Hered. Washington **5** 1914 (389–399 with tables). **183**

Rabaud, É. Dominance et recessivité chez les souris "luxées." Paris Bul. Soc. Zool. **42** 1917 (87–97). **184**

Reimers, J. H. W. T. Mendelfactoren inzake haarkleur bij paarden. [Facteurs mendéliens dans la couleur du pelage des chevaux.] Cultura orgaan Nederlandsche landbouwkundigen Tiel. **29** 1917 (248–262 339–354 377–394 404–416). **185**

Resink, A. J. Mededeeling over ontwikkeling van het mesoblast by *Erinaceus* en *Tupaia.* [Mitteilung über Entwicklung des Mesoblast bei Erinaceus und Tupaia.] Helder Tydschr. Ned. Dierk. Ver. **16** (2) 1917 (III–IV). **186**

Retterer, E. Du developpement et de la structure du cartilage hyalin. Paris C. R. soc. biol. **80** 1917 (23–27). **187**

Retterer, E. Origine nucleaire des hematies (uterus gravide et moelle osseuse). Paris C. R. soc. biol. **80** 1917 (551–554). **188**

Retterer, E. De l'origine et de la structure du systeme medullaire du cartilage et de l'os. Paris C. R. soc. biol. **80** 1917 (662–665). **189**

Retterer, E. Structure et evolution de la tonsile conjonctivale du chien. Paris C. R. soc. biol. **80** 1917 (860–863). **190**

Retterer, E. and Neuville, H. Des organes genitaux externes du Tanrec. Paris C. R. soc. biol. **80** 1917 (19–23). **191**

Retterer, E. and Neuville, H. De l'appendice urétral de quelques ruminants. Paris C. R. soc. biol. **80** 1917 (178–181). **192**

Retterer, E. and Neuville, H. De la structure de l'appendice urethral. Paris C. R. soc. biol. **80** 1917 (259–263). **193**

Retterer, E. and Neuville, H. Du pénis et du gland du mouton. Paris C. R. soc. biol. **80** 1917 (287–290). **194**

Retterer, E. and Neuville, H. Du developpement et des homologies du gland des Ovinés, des Antilopinés et des Bovinés. Paris C. R. soc. biol. **80** 1917 (339–343). **195**

Retterer, E. and Neuville, H. Du pénis et du gland des Cervidés. Paris C. R. soc. biol. **80** 1917 (379–382). **196**

Retterer, E. and Neuville, H. Du pénis et du gland du Guib et du Nylgau, ainsi que des affinités de ces ruminants. Paris C. R. soc. biol. **80** 1917 (438–441). **197**

Retterer, E. and Neuville, H. Appreciation des caractères anatomiques au point de vue de la classification. (Reponse à M. Trouessart.) Paris C. R. soc. biol. **80** 1917 (607–611). **198**

Revilliod, P. Fledermäuse aus der Braunkohle von Messel bei Darmstadt. Darmstadt Abh. geol. Landesanst. **7** 1917 (160–201) 18 text-figs. and pl. **199**

Revilliod, P. Contribution a l'étude des Chiroptères des terrains tertiaires. Premiere partie. Genève Mém. Soc. Paleont. Suisse **43** 1917 (3–56) pl. & 13 text-figs. **200**

Ritzema Bos, J. De muskusrat, bisamrat of *Ondatra* (*Fiber zibethicus* L.). [Die Moschusratte, Bisamratte oder *Ondatra* (*Fiber*) *zibethicus* L.] Tyds. Plantenziekten Wageningen **23** 1917 (47–79 2 pls.). **201**

Roberts, A. Fourth supplementary list of mammals in the collection of the Transvaal Museum. Ann. Transvaal Mus. Pretoria **5** 1917 (263–278). **202**

Roberts, A. Descriptions of two new species of a new subgenus of bats and a new species of mole rats. Ann. Transvaal Mus. Pretoria **6** 1917 (4–6). **203**

Robinson, A. and Gibson, A. Description of a reconstruction model of a horse embryo twenty-one days old. Edinburgh Trans. R. Soc. **51** 1917 (331–346). **204**

Robinson, H. C. On two little-known Rats from Western Java. J. Fed. Malay Mus. Kuala Lumpur **7** 1917 (93–99). **205**

Robinson, H. C. On three new races of Malayan mammals. J. Fed. Malay Mus. Kuala Lumpur **7** 1917 (101–105). **206**

Robinson, H. C. and Thomas, O. A new Mink-line *Mustela* from Java. Ann. Mag. Nat. Hist. London **20** 1917 (261–262). **207**

Roegholt, M. N. De topographie van thorax en abdomen van Chimpansé, *Semnopithecus melalophus* en *Macacus cynomolgus,* vergeleken met die van den

mensch. [Die Topographie des Thorax und Abdomens des Chimpansé, *Semnopithecus melalophus* und *Macacus cynomolgus*, verglichen mit derjenigen des Menschen.] Leiden (E. J. Brill) **1917** (173 13 Taf.). **208**

Roosevelt, T. Through the Brazilian wilderness. New York (Scribner) **1914** (xiv + 11 + 383 with pls. maps). **209**

R[ossi], G. La Razza bruna. Agricolt. Ticinese Lugano **40** 1908 No. 17. **210**

Russ, S. *vide* Mottram, C.

Scharff, R. F. On the Irish Pig. Irish Nat. Dublin **26** 1917 (173–185) pl. **211**

Schulte, H. von W. A note on the lumbar vertebrae of *Scutisorex* Thomas. New York N.Y. Bul. Amer. Mus. Nat. Hist. **37** 1917 (785–792). **212**

Sera, G. L. La testimonianza dei fossili di antropomorfi per la questione dell' origine dell' uomo. Milano Atti Soc. ital. sc. nat. **56** 1917 (25–156). **213**

Sergi, G. Su l'uomo fossile dell' Olmo (Provincia di Arezzo). Roma Riv. Antropologia **21** 1916–1917 (1–17 of reprint) 6 text-figs. **214**

Shaw, D. M. Form and function of teeth: a theory of "maximum shear." J. Anat. London **52** 1917 (97–106). **215**

Sheehy, E. J. An abnormality in the arterial system of the rabbit. Dublin Sci. Proc. R. Soc. **15** N.S. 1916 (159–162). **216**

Shimek, B. Geology of Harrison and Monona counties. Iowa Geol. Surv. Des Moines **20** (Rep. **1909**) 1910 (271–485 with maps pls. tables ff.). **217**

Simpson, Q. I. Coat-pattern in mammals. J. Hered. Washington **5** 1914 (329–339 with ff.). **218**

Slye, Maud. The incidence and inheritability of spontaneous tumors in mice. (Second report.) J. Med. Res. Boston **30** (N. Ser. **25**) 1914 (281–298 with charts). **219**

Slye, Maud, **Holmes,** Harriet F. and **Wells,** H. Gideon. The primary spontaneous tumors of the lungs in mice. Studies on the incidence and inheritability of spontaneous tumors in mice. Fourth communication. J. Med. Res. Boston **30** (N. Ser. **25**) 1914 (417–442 with pls.). **220**

Smirnov, N. [Смирновъ, Н.] Замѣтка объ урмійскомъ дикомъ баранѣ (*Ovis orientalis urmiana* Guenther). [Note on the Wild Sheep of the Urmi Island (*Ovis orientalis urmiana* Guenther.] Tiflis Bul. Mus. Cauc. **10** 1916 (273–288) pl. **221**

Sørensen, W. Taenkende Heste og—tankeløse Mennesker. Intelligent horses and injudicious men. Reasons on account of the horses of Mr. Krall. København Gads Magasin **10** 1916 (619–623). **222**

Soulié, A. *vide* Tourneux, F.

Sowerby, A. de C. On Heude's collection of Pigs, Sika, Serows and Gorals in the Sikawei Museum, Shanghai. London Proc. Zool. Soc. **1917** 1917 (7–26). **223**

Sowerby, A. de C. On a new species of Shrew from Corea. Ann. Mag. Nat. Hist. London **20** 1917 (317–319). **224**

Stehlin, H. G. Die Säugetiere des schweizerischen Eocaens. Teil 7 H. 2. M Zürich Abh. Schweiz. pal. Ges. **41** 1916 (1299–1552). **225**

Stehlin, H. G. Miocäne Säugertierreste aus der Gegend von Elm (Prov. Hessen). Basel Verh. Natf. Ges. **28** 1917 (191–205). **226**

Storer, T. I. *vide* Grinnell, J.

Terry, R. J. The primordial cranium of the cat. J. Morph. Philadelphia Pa. **29** 1917 (281–433) 30 figs. 12 pls. **227**

Thomas, O. Notes on the species of the genus *Cavia*. Ann. Mag. Nat. Hist. London **19** 1917 (152–160). **228**

Thomas, O. A new bat of the genus *Scotaecus*. Ann. Mag. Nat. Hist. London **19** 1917 (280–281). **229**

Thomas, O. A new species of *Aconaemys* from Southern Chili. Ann. Mag. Nat. Hist. London **19** 1917 (281–282). **230**

Thomas, O. Some notes on Three-toed Sloths. Ann. Mag. Nat. Hist. London **19** 1917 (352–357). **231**

Thomas, O. A new vole from Palestine. Ann. Mag. Nat. Hist. London **19** 1917 (450–451). **232**

Thomas, O. On the small Hamsters that have been referred to *Cricetulus phaeus* and *campbelli*. Ann. Mag. Nat. Hist. London **19** 1917 (452–457). **233**

Thomas, O. The geographical races of *Galago crassicaudatus.* Ann. Mag. Nat. Hist. London **20** 1917 (47–50). 234

Thomas, O. Some mammals from the delta of the Parana. Ann. Mag. Nat. Hist. London **20** 1917 (95–100). 235

Thomas, O. On the arrangement of the South American rats allied to *Oryzomys* and *Rhipidomys.* Ann. Mag. Nat. Hist. London **20** 1917 (192–198). 236

Thomas, O. Two new rats of the *Rattus confucianus* group. Ann. Mag. Nat. Hist. London **20** 1917 (198–200). 237

Thomas, O. A new Agouti from the Moon Mountains, Southern British Guiana, with notes on other species. Ann. Mag. Nat. Hist. London **20** 1917 (259–261). 238

Thomas, O. Notes on Agoutis, with descriptions of new forms. Ann. Mag. Nat. Hist. London **20** 1917 (310–313). 239

Thomas, O. A new *Heliophobius* from North-eastern Rhodesia. Ann. Mag. Nat. Hist. London **20** 1917 (314–315). 240

Thomas, O. The *Spalax* of the Grecian Archipelago. Ann. Mag. Nat. Hist. London **20** 1917 (315–317). 241

Thomas, O. A new rat of the genus *Mylomys* from the Upper Nile. Ann. Mag. Nat. Hist. London **20** 1917 (362–363). 242

Thomas, O. Notes on *Georychus* and its allies. Ann. Mag. Nat. Hist. London **20** 1917 (441–444). 243

Thomas, O. Preliminary diagnoses of new mammals obtained by the Yale-National Geographic Society Peruvian Expedition. Washington D.C. Smithsonian Inst. Misc. Collect. **68** No. 4 1917 (1–3). 244

Thomas, O. Scientific Results from the Mammal Survey. No. XVI. Bombay J. Nat. Hist. Soc. **25** 1917 (199–206). 245

Thomas, O. On the allocation of the name *Sciurus finlaysoni,* Horsfield. J. Nat. Hist. Soc. Siam Bankok **2** 1917 (343–345) with appendix by C. B. Kloss (345–346). 246

Thomas, O. *vide* Robinson, H. C.

Tillett, B. C. The evolution of the sheep. Ottawa Nat **29** Ottawa 1915–16 (90–93). 247

Tourneux, F. Les noyaux sous-zonaires de l'ovule de la taupe. Toulouse Mem. Acad. Sci. inscrip. (II) **2** 1914 (375–378). 248

Tourneux, F. et **Soulié,** A. Le proamnios chez l'embryon de taupe (*Talpa europaea*). Toulouse Mem. Acad. Sci. inscrip. (II) **4** 1916 (453–454). 249

Trouessart, E.-L. Les rapports de l'anatomie et de la zoologie. Reponse a M. Retterer. Paris C. R. soc. biol. **80** 1917 (527–529). 250

Trouessart, E.-L. Rapports de l'anatomie et de la Zoologie systematique. Deuxieme reponse à M. Retterer. Paris C. R. soc. biol. **80** 1917 (611–613). 251

Trouessart, E.-L. Le lapin de Porto Santo et le lapin négre de la Camargue. Bul. Muséum Paris **1917** (366–373) text-fig. 252

Vecchio, C. del. Osservazioni su alcuni resti di *Canidi* raccolti nella grotta Guglielmo sul Palanzone (alta Brianza). Atti Soc. ital. sc. nat. **55** 1917 (239–251). 253

Waite, E. R. Results of the South Australian Museum Expedition to Strzelecki and Cooper Creeks. *Mammalia* and *Ophidia.* Adelaide Trans. R. Soc. S. Aust. **41** 1917 (430–434). 254

Wang, C.-C. The earliest stages of development of the blood-vessels and of the heart in ferret embryos. J. Anat. London **52** 1917 (107–185) 37 text-figs. 255

Watson, D. M. S. The evolution of the tetrapod shoulder girdle and fore-limb. J. Anat. London **52** 1917 (1–64). 256

Wells, H. G. and **Caldwell,** G. T. The purine enzymes of the anthropoids and marsupials. [Relationship of anthropoid apes to man.] New York Proc. Soc. Exp. Biol. Med. **11** 1914 (153–154). 257

Wells, H. Gideon *vide* Slye, Maud.

White, H. L. Kangaroos in captivity. Australian Zool. Sydney N.S.W. **1** 1917 (83–84). 258

Winge, Herluf. Udsigt over Insektaedernes indbyrdes Slaegtskab. [A survey of the mutual relationship of the Insectivora.] København Nath. Medd. **68** 1917 (83–203). **259**

Wood, N. A. Notes on the mammals of Alger County, Michigan. Ann. Arbor Occ. Papers Mus. Zool. No. **36** 1917 (1–8) map and 4 pls. **260**

Wroughton, R. C. Bombay Natural History Society's Mammal Survey of India, Burma and Ceylon. Report No. 27, Bhutan Duars. Bombay J. Nat. Hist. Soc. **25** 1917 (63–71). **261**

Wroughton, R. C. Bombay Natural History Society's Mammal Survey of India, Burma and Ceylon. Report No. 28. Kalimpong (Darjiling). Bombay J. Nat. Hist. Soc. **25** 1917 (274–278). **262**

Wroughton, R. C. Scientific Results from the Mammal Survey. No. XV. Bombay J. Nat. Hist. Soc. **25** 1917 (40–51). **263**

Wroughton, R. C. Scientific Results from the Mammal Survey. No. XVII. Bombay J. Nat. Hist. Soc. **25** 1918 (361–362). **264**

Yatsu, N. Tan-hoda to so-hoda no ainoko. [Hybrid between camel and dromedary.] Dobuts. Z. Tokyo **29** 1917 (Prelude 15–16 with pl.). **265**

Yocom, H. B. Some phases of spermatogenesis in the mouse. Berkeley Univ. Cal. Pub. Zool. **16** 1917 (371–380). **266**

Young, C. C. Origin of Karakul sheep. J. Hered. Washington **5** 1914 (445–447 with pl.). **267**

II.—SUBJECT INDEX.

6003 to 6027

N.B.—For full References go to Titles.

COMPREHENSIVE AND GENERAL. 6003

Treatises, Text-Books, etc.

Kingsley, 128.

Institutions, Collections.

Bell, 24 ; Sowerby, 223.

Economics.

Boas, 27 ; Boynton, 35 ; Dixon, 74, 75 ; Dixon and de Ong, 76 ; Gunther, 98 ; Ritzema Bos, 201.

Whaling, **Andrews, 12 ; Allen, 4.**

Miscellaneous.

Aguilar-Amat, 2 ; Kloss, 130 ; Retterer and Neuville, 198 ; Trouessart, 250, 251.

STRUCTURE. 6007

General and Comparative.

Bolk, 30 ; Burne, 39 ; Roegholt, 208.

Histology.

Anthony, 16 ; Costa, 67 ; Jordan, 126 ; Retterer, 187, 188, 189, 190.

Tegument.

Andersen, 11 ; Boas, 28 ; Camerano, 55 ; Pocock, 174.

Nervous System and Sense-Organs.

Bespaloff, 26 ; Boule & Anthony, 32 ; Brouwer, 37 ; Costa, 67 ; Hulshoff Pol, 114 ; Landacre, 139 ; Luna, 144.

Myology.

Anthony, 17 ; Paterson, 172.

Osteology.

General.

Allen, 7 ; Anthony, 16 ; Barge, 21 ; Boule & Anthony, 32 ; Camerano, 48-54 ; Camerano, 48-51 ; Duckworth, 77 ; Fawcett, 82 ; Gyldenstolpe, 99 ; Hollister, 111 ; Jones, 124, 125 ; M'Intosh, 152 ; Nuttall, 167 ; Petronievics, 173 ; Schulte, 212 ; Sergi, 214 ; Terry, 227 ; Watson, 256.

Os penis, **Alphéraky, 9.**

Osteology and Dentition.

Allen, 5 ; Anthony, 13, 15 ; Chapman, 60 ; Depéret, 71 ; Hay, 106 ; Narbel, 164 ; Newton, 165 ; Pycraft, 182 ; Revilliod, 199, 200 ; Sera, 213.

Dentition (*vide etiam* Osteology).

Airaghi, 3 ; Andersen, 10 ; Carter, 58 ; Gidley, 91 ; Hay, 105 ; Shaw, 215.

Alimentary System.

Mackenzie, 146.

Circulatory and Respiratory Systems.

Calvet, 47; Sheehy, 216; Wang, 255.

Blood, Lymph, etc.

Baudet, 23; Boynton, 34; Lenze, 140.

Excretory Organs; Special Glands.

da Costa, 67; Garcia, 85; Johnson, 121.

Organs of Reproduction.

Alphéraky, 9; Jones, 123; Retterer & Neuville, 191-197; Tourneux, 248.

Placenta.

Tourneux et Soulié, 249.

PHYSIOLOGY. 6011

Chenoweth, 62; Groot, 97; Hammond, 102; Hollister, 111; Iwanow, 115, 117, 118; Jolly, 122; Jones, 125; Lewis, 141; Lillie, 142; Marshall & Halnan, 148; Møllgaard, 154, 155; Möllgaard & Andersen, 156, 157; Mottram & Russ, 162; Slye, 219; Slye, Holmes & Wells, 220.

DEVELOPMENT. 6015

Ovum; Oogenesis; Spermatozoon; Spermatogenesis.

Charlton, 16; Iwanow, 115-119; Jordan, 126; Kingery, 127; Pratt & Long, 181; Yocom, 266.

Embryology.

Costa, 67; Ewart, 80; Fawcett, 82; Hance, 103; Hulshoff Pol, 113; Parker, 171; Resink, 186; Robinson & Gibson, 204; Terry, 227; Wang, 255.

ETHOLOGY. 6019

General.

Criddle, 69.

Instinct, Mental Processes, Psychology.

Carr, 57; Haagner, 100; Sørensen, 222.

Habits.

General, and of particular creatures.

Babault, 18; Boas, 27; Bolam, 29; Burrell, 40; Carpenter, 56; Deichmann, 70; Grinnell & Storer, 96; Lang & Chapin, 8; Pitt, 173a; Pocock, 180; Waite, 254; White, 258.

Seasonal Changes, etc.

Abe, 1; Andersen, 10, 11.

VARIATION AND ÆTIOLOGY. 6023

Variation.

Calonne-Beaufaict, 46; Krieg, 137.

Sex Determination.

Bell, 25; Lillie, 142.

Abnormalities.

Calvet, 47; Garcia, 85; Hays, 108; Sheehy, 216.

Hybrids.

Boyd, 33; Detlefsen, 72; Goodnight, 94; Yatsu, 265.

Heredity.

Dürst, 78; Fantuzzi, 81; Gianettoni, 86, 87, 88, 89, 90; Hagedoorn, 101; Haynes, 107; Little, 143; Macdowell, 145; Marshall, 149; McLean, 150; Molo, 158, 159, 160, 161; Rabaud, 183, 184; Reimers, 185; Rossi, 210; Simpson, 218.

Environment and Distribution.

Cary, 59; Chenoweth, 62; Dice, 73; Grinnell, 95; Hollister, 111; Jones, 125.

Evolution, Phylogeny.

Depéret, 71; Sera, 213; Tillett, 247; Watson, 256; Winge, 259; Young, 267.

GEOGRAPHY. 6027

Europe. *d*

Russia in Europe. *db*

Crimea, **Ognev, 168.**

Germany. *dc*

Tertiary, **Revilliod, 199**; Miocene, **Stehlin, 226.**

British Islands. *de*

Booth, 31; **Clarke, 65**; **Coward, 68**; **Harmer, 104**; **M'Intosh, 152**; **Scharff, 211.**

Prehistoric, **Moir, 153**; Pleistocene, **Newton, 165, 166.**

France. *df*

Tertiary, **Depéret, 71**; **Helbing, 109**; **Revilliod, 200.**

Pleistocene, Jersey, **Marett, 147.**

Iberian Peninsula. *dg*

Buhigas, 38; **Camerano, 53**; **França, 83**; **Fuente, 84.**

Spain, prehistoric, **Miguel de Barandiarán, 151**; **Pan, 170.**

Italy. *dh*

Pliocene and Pleistocene, **Airaghi, 3**; Pleistocene, **Battaglia, 22**; **Sergi, 214**; **Vecchio, 253.**

Switzerland. *di*

Eocene, **Stehlin, 225**; Pleistocene, **Hescheler, 110.**

S.E. Europe. *dl*

Greece, I. of Lemnos, **Thomas, 241.**

Asia *e*

Camerano, 54; **Thomas, 233.**

China and Tibet. *eb*

China, **Kuroda, 138**; **Sowerby, 223**; **Thomas, 237.**

Thibet, **Pocock, 177.**

Japan and Korea. *ec*

Corea, **Kuroda, 138**; **Sowerby, 224.**

Formosa, **Thomas, 237.**

Siam and Yunnan. *ed*

Siam, **Kloss, 129, 131** to **135**; **Thomas, 246.**

India and Burma. *ef*

India, **Andersen, 11**; **Thomas, 245**; **Wroughton, 261** to **264.**

Burma, **Thomas, 245**; **Wroughton, 263, 264.**

Malaysia. *eg*

Cabrera, 45; **Gyldenstolpe, 99**; **Kloss, 135, 136**; **Robinson, 206.**

Celebes, **Büttikofer, 41.**

Java, **Robinson, 205**; **Robinson & Thomas, 207.**

Persia, Syria, and Arabia. *eh*

Kurdistan, **Smirnov, 221.**

Palestine, **Thomas, 232.**

Africa. *f*

Brinkmann, 36; **Thomas, 234**; **Wroughton, 263.**

Porto Santo, **Trouessart, 252.**

Bahr-el-Ghazal, **Thomas, 242.**

Spanish Guinea, **Cabrera, 45.**

Congo, **Allen, 7**; **Allen, Lang & Chapin, 8**; **Calonne-Beaufaict, 46.**

Nyasaland, **Thomas, 229.**

N.E. Rhodesia, **Thomas, 240.**

Madagascar, **Pocock, 175.**

South Africa, **Chubb, 63**; **Roberts, 202, 203**; **Thomas, 243**

North America. *g*

Elliot, 79; **Goldman, 92.**

Yukon Pleistocene, **Hay, 106.**

Nova Scotia, **Jackson, 120.**

Maine, **Copeland & Pope, 66.**

New England, **Allen, 4.**

Iowa, **Shimek, 217.**

Michigan, **Wood, 260.**

Kansas, Pleistocene, **Hay, 105.**

North Dakota, **Bailey, Bell & Brannon, 20**; Paleocene, **Gidley, 91.**

Washington, **Dice, 73.**

Wyoming, **Bailey, 19**; **Cary, 59**; **Goldman, 93**; **Howell, 112.**

California, **Dixon, 75**; **Dixon & de Ong, 76**; **Grinnell, 95**; **Grinnell & Storer, 96.**

Central and South America: West Indies.

Central America, **Cabrera, 42**; **Goldman, 92**; **Thomas, 231.**

Panama, **Anthony, 14.**

South America, **Cabrera, 42**; **Pocock, 176, 178**; **Thomas, 228, 231, 236, 239.**

Brazil, **Roosevelt, 209.**

British Guiana, **Thomas, 238.**

Peru, **Thomas, 244.**

Southern Chili, **Thomas, 230.**

Argentina, **Thomas, 235.**

West Indies, **Elliot, 79.**

Cuba, Pleistocene, **Allen, 5**; **Anthony, 14.**

Jamaica, **Allen, 6.**

Santo Domingo, **Allen, 6.**

Porto Rico, Pleistocene, **Anthony, 13, 15.**

Australasia.

Australia, Tertiary, **Chapman, 60.**

Australia, **Waite, 254.**

III.—SYSTEMATIC. 6031

N.B.—Numerals in Clarendon type, when not indicating a Volume, refer to Titles.

General.

Eocene mammals from Euzet-les-Bains, general considerations, Depéret Ann. Univ. Lyon Fasc. **40** p. 255; Pleistocene list from Jersey, Marett Archaeologia **67** p. 84; Type and figured specimens fossil mammals in Ipswich Museum, Bell Ipswich J. F. Cl. **5** p. 41.

Malay mammals skull measurements (*Presbytis, Macaca, Tupaia, Lutra, Ratufa, Sciurus, Rattus* and *Sus*), Gyldenstolpe Ark. Zool. Stockholm **10** No. 26 p. 24.

I.—PRIMATES.

Thorax and abdomen in higher primates, Roegholt **208**; purine enzymes, relationship of anthropoid apes to man, Wells & Caldwell New York Proc. Soc. Exp. Biol. Med. **11** p. 153.

A.—Anthropoidea.

Hominidae and Simiidae.

Anthropoidea fossil forms reviewed, dental and osteological characters, and bearing on origin of man, Sera Atti Soc. ital. sc. nat. **56** p. 25.

†*Eoanthropus dawsoni* lower jaw not that of a Chimpanzee, Pycraft Sci. Prog. **11** p. 389; cranial capacity, Nuttall Man **17** p. 82.

Gorilla popular review of species and subspecies, habits, Brinkmann Bergen Naturen **41** p. 357; notes on captive in Dublin, Carpenter Irish Nat. **26** p. 125.

Homo fossil endocranial casts as guides to neopallial morphology, Boule & Anthony J. Anat. London **51** p. 95; skull from Pleistocene of Olmo, Arezzo, Sergi Riv. Antropologia **21** p. 1.

Cercopithecidae.

Cynopithecus key to species, description figures and distribution, Buttikofer Zool. Meded. Leiden **3** p. 1.

Macaca siamica sp. n., North Siam, Kloss J. Nat. Hist. Soc. Siam **2** p. 247.

Pithecus barbei fig. of head of type, *shanicus* sp. n. N. Shan States p. 47; *shanicus* a synonym of *P. melamerus* Elliot p. 361, Wroughton J. Bombay N.H.S. **25.**

Semnopithecus development of fossa sylvii, Hulshoff Pol Amsterdam Proc. Sci. K. Akad. Wet. **19** p. 938.

Cebidae & Hapalidae.

Cebus notes on the genus and provisional key to species, Cabrera Revista Real Ac. Ci. Ex. Fis. Nat. Madrid **16** p. 1.

Hapalidae characters and classification, Pocock Ann. Mag. N. H. **20** p. 247.

B.—Lemuroidea.

†*Adapis* p. 219 (*Leptadapis*) *magnus* p. 222, rapports et phylogénie p. 229, DEPÉRET Ann. Univ. Lyon Fasc. **40.**

Galago crassicaudatus geographical races and nomenclature p. 47, *c. umbrosus* p. 49 subsp. n. N. Transvaal, THOMAS Ann. Mag. N.H. **20.**

Hapalemur and *Prolemur* generic distinctions, POCOCK Ann. Mag. N.H. **19** p. 345.

Hapalemur schlegeli **sp. n.** (?) N.W. coast of Madagascar, POCOCK Ann. Mag. N.H. **19** p. 348.

Lemur skull orbito-temporal region and *os planum*, JONES P.Z.S. **1917** p. 323.

Loris malabaricus **sp. n.** Malabar (S. Coorg), WROUGHTON J. Bombay N.H.S. **25** p. 45.

†*Microchaerus* p. 237, *edwardsi* p. 238, rapports et phylogénie p. 243, DEPÉRET Ann. Univ. Lyon. Fasc. **40.**

Nycticebus coucang insularis subsp. n. Pulau Tioman Pahang, ROBINSON J. Fed. Malay Mus. **7** p. 101.

Prolemur see *Hapalemur*.

II.—CHIROPTERA.

Tertiary Braunkohle of Darmstadt, REVILLIOD Darmstadt Abh. geol Landesanst **7** p. 160.

Congo, systematic list p. 405, ALLEN, distribution and ecology p. 479, field notes p. 497, LANG & CHAPIN Bul. Amer. Mus. N.H. **37**; appareil surrénal, systeme nerveux sympathique, embryology, DA COSTA Mem. Soc. Port. Sc. Nat. **4** p. 1.

VESPERTILIONIDAE.

Eptesicus ater p. 443, *faradjius* p. 444 Faradje, *garambae* p. 445 Garamba, Belgian Congo, **spp. n.**, ALLEN Bul. Amer. Mus. N.H. **37.**

Glauconycteris humeralis p. 448, *alboguttatus* p. 449 Medje Belgian Congo, **spp. n.**, ALLEN Bul. Amer. Mus. N.H. **37.**

Miniopterus breyeri vicinior Aba Belgian Congo subsp. n., ALLEN Bul. Amer. Mus. N.H. **37** p. 450.

Pipistrellus abaensis **sp. n.** Aba Belgian Congo, ALLEN Bul. Amer. Mus. N.H. **37** p. 442.

Scotaecus woodi **sp. n.** Southern Nyasaland, THOMAS Ann. Mag. N.H. **19** p. 280.

Scotophilus gairdneri **sp. n.** Central Siam, KLOSS J. Nat. Hist. Soc. Siam **2** p. 284.

RHINOLOPHIDAE, HIPPOSIDERIDAE & NYCTERIDAE.

Hipposideros caffer niapu p. 431 Niapu, *abae* p. 432 Aba, *nanus* p. 434 Faradje, *langi* p. 434 Avakubi, *gigas niangarae* p. 438 Niangara Belgian Congo subspp. *et* **spp. n.**, ALLEN Bul. Amer. Mus. N.H. **37.**

Nycteris pallida p. 425 Faradje, *avakubia* p. 426 Avakubi, Belgian Congo **spp. n.**, ALLEN Bull. Amer. Mus. Nat. Hist. **37.**

†*Palaeophyllophora* **gen. n.** p 36, *sanctae-nebouleae* p. 43 Ste Neboule, *quercyi* p. 43 Quercy & Mormont, **spp. n.**, Tertiary, REVILLIOD Mém. Soc. Paleont. Suisse **43.**

†*Pseudorhinolophus* history p. 5, description of material p. 9, *schlosseri* p. 11 (fig.) p. 48 (description), *weithoferi* p. 48 **spp. n.**, *morloti* p. 47, Tertiary phosphorites Quercy, REVILLIOD Mém. Soc. Paleont. Suisse **43.**

Rhinolophus abae p. 428, *axillaris* p. 429 Aba, Uele Dist. Belgian Congo **spp. n.**, ALLEN Bul. Amer. Mus. N.H. **37**; *rouxi rouxi* seasonal changes in coloration, p. 260; determination of individual age by dental stages of wear, age of Bat population p. 249, ANDERSEN J., Bombay N.H.S. **25.**

PHYLLOSTOMIDAE.

Chilonycteris parnellii pusillus subsp. n., Santo Domingo, ALLEN P. Biol. Soc. Washington **30** p. 168.

Erophylla sezekorni syops subsp. n., Jamaica, ALLEN P. Biol. Soc. Washington **30** p. 167.

Monophyllus† *frater* **sp. n.** Cave deposit Porto Rico, ANTHONY Bull. Amer. Mus. N.H. **37** p. 565.

Phyllonycteris† *major* **sp. n.** Cave deposit Porto Rico, ANTHONY Bull. Amer. Mus. N.H. **37** p. 567.

Phyllops† *vetus* **sp. n.**, fossil (Pleistocene ?) Cuba, ANTHONY Bul. Amer. Mus. N.H. **37** p. 337.

Phyllostomus hastatus curaca subsp. n., Archidona, R. Napo, Ecuador, CABRERA Madrid Trab. Mus. Nac. Ci. Nat. **31** p. 12.

Sturnira lilium parvidens subsp. n. Mexico, GOLDMAN P. Biol. Soc. Washington **30** p. 116.

Vampyrus spectrum nelsoni subsp. n. Vera Cruz, Mexico, GOLDMAN P. Biol. Soc. Washington **30** p. 115.

MOLOSSIDAE.

Allomops p. 470 **subgen. n.**, of *Mops* (type *Mops* (*Allomops*) *osborni*); (*A*) *osborni* p. 473 Kinshasa, (*A*) *occipitalis* p. 474 Avakubi, (*A*) *faradjius* p. 476 Faradje, (*A*) *nanulus* p. 477 Niangara, Belgian Congo **spp. n.**, ALLEN Bul. Amer. Mus. N.H. **37**.

Chaerephon frater p. 456 Malela (near Boma), *russatus* p. 458 Medje; *Lophomops* p. 460 for *C.* (*Lophomops*) *chapini* p. 461 Faradje (*L*) *cristatus* p. 463 Boma (*L*) *abae* p. 464 Aba, Belgian Congo **subgen.** *et* **spp. n.**, ALLEN Bul. Amer. Mus. N.H. **37**.

Lophomops **subgen. n.** of *Chaerephon* (type *C.* (*L*) *chapini*), ALLEN Bul. Amer. Mus. N.H. **37** p. 460.

Molossops aequatorianus **sp. n.**, Barbahoyo, R. Guayas, Ecuador, CABRERA Madrid Trab. Mus. Nac. Ci. Nat. **31** p. 20.

Mops congicus p. 467 Medje, *niangarae* p. 468 Niangara, *trevori* p. 469 Faradje, Belgian Congo **spp. n.**, ALLEN Bul. Amer. Mus. N.H. **37** (see also *Allomops*).

Nyctinomus ochraceus Medje, Belgian Congo **sp. n.**, ABLEN Bul. Amer. Mus. N.H. **37** p. 455.

Otomops icarus **sp. n.** CHUBB Ann. Durb. Mus. p. 433.

Platymops petrophilus p. 4 Rustenburg, *haagneri* p. 5 Damaraland **spp. n.**, ROBERTS Ann. Transv. Mus. **6** (see further under *Sauromys*).

Sauromys **subgen. n.**, for *Platymops haagneri* and *petrophilus*, ROBERTS Ann. Transvaal Mus. **6** p. 5.

†ARCHAEONYCTERIDAE & PALAEOCHIROPTERYGIDAE.

†*Archaeonycteris trigonodon* **gen.** *et* **sp. n.**, Braunkohle Darmstadt, REVILLIOD Darmstadt, Abh. geol. Landesanst **7** p. 181.

†*Palaeochiropteryx* p. 163 *tupaiodon* p. 179 *spiegeli* p. 180 **gen.** *et* **spp. n.**, Braunkohle Darmstadt, REVILLIOD Darmstadt Abh. geol. Landesanst **7**.

III.—INSECTIVORA.

Survey of the mutual relationships, WINGE København Nath. Medd. **68** 1917 (83-203).

MACROSCELIDAE & TUPAIIDAE.

Elephantulus rupestris mapogonensis 277; *van-dami* p. 277 subsp. *et* **sp. n.**, ROBERTS, A. Ann. Transv. Mus. **5**.

Tupaia genitalia, JONES J Anat. London **51** p. 118; *clarissa* p. 200 S. Tenasserim, *belangeri tenaster* p. 201 Tenasserim River **sp.** *et* **subsp. n.**, THOMAS J. Bombay N.H.S. **25**.

SORICIDAE & TALPIDAE.

Crocidura aagaardi **sp. n.** Siam, KLOSS J. Nat. Hist. Soc. Siam **2** p. 283; *gravida* Langkawi Ids. W. Coast, *tionis* Tioman Id. E. Coast, Malay Peninsula, **spp. n.**, KLOSS J. Fed. Malay Mus. **7** p. 127; *thomasi* **sp. n.** Corea, SOWERBY Ann. Mag. N.H. **20** p. 318.

Microsorex hoyi in Maine, COPELAND & POPE P. Biol. Soc. Washington **30** p. 160.

Neosorex palustris albibarbis in Maine, COPELAND & POPE P. Biol. Soc. Washington **30** p. 160.

Pachyura malayana **sp. n.** Siam, KLOSS J. Nat. Hist. Soc. Siam **2** p. 282.

Scutisoricinae **subfam. n.** of *Soricidae* for *Scutisorex* group, ALLEN Bull. Amer. Mus. N.H. **37** p. 781.

Scutisorex osteology, ALLEN Bull. Amer. Mus. N.H. **37** p. 769 field notes, LANG *ibid* p. 781; lumbar vertebrae, SCHULTE *ibid* p. 785.

Sorex fumeus umbrosus subsp. n. Nova Scotia, JACKSON P. Biol. Soc. Washington **30** p. 149.

Talpa europaea noyaux sous-zonaires de l'ovule, TOURNEUX 2 p. 375; proamnios, TOURNEUX et SOULIE Mem. Ac. Sc. Toulouse (II) 4 p. 453; in captivity, PITT Scot. Nat. **1917** pp. 207 and 231; How does the mole eat earth-worms? DEICHMANN København Nath. Medd. **68** p. 209.

†NESOPHONTIDAE.

† ? *Nesophontes micrus* **sp. n.** Pleistocene cave Matanzas Cuba, ALLEN Bul. Mus. Comp. Zool. Harvard **61** p. 5

CENTETIDAE & CHRYSOCHLORIDAE.

Amblysomus hottentotus garneri **subsp. n.** ROBERTS Ann. Transv. Mus. **5** p. 278.

Centetes genitalia, RETTERER & NEUVILLE C. R. soc. biol. Paris **80** p. 19.

IV.—CARNIVORA.

Miocene Elm, STEHLIN Basel Verh. Natf. Ges. **28** p. 193; partizione del nasale No. 709, "accessory" bones in premaxillary & maxillo-nasal regions No. 710, CAMERANO Boll. Mus. Zool. Anat. Torino **31**.

A.—Carnassidentia.

FELIDAE.

External characters **19** p. 113; South American classification **20** p. 43; classification & key to genera **20** p. 329, POCOCK Ann. Mag. N. H.

Felis leo effect of captivity on cranial form, JONES P. Z. S. **1917** p. 333; *leo massaica* effects of captivity on skull, HOLLISTER Proc. U. S. Nat. Mus. 53 p. 177; *lynx* Pleistocene Sutherland, NEWTON Proc. R. Soc. Edinburgh **37** p. 348; *guttula amazonica* subsp. n. Tabatinga Amazonia, CABRERA Madrid Trab. Mus. Nac. Ci. Nat. **31** p. 28; *temmincki* note, GAIRDNER J. Nat. Hist. Soc. Siam **2** p. 251; domestic cat syndactyly in, HAYS J. Morph. **30** p. 65; primordial cranium, TERRY J. Morph. Philad. **29** p. 281.

VIVERRIDAE.

Mungos auropunctatus & *nepalensis* measurements, WROUGHTON J. Bombay N. H. S. 25 p. 68; *siamensis* **sp. n.** N. Siam, KLOSS J. Nat. Hist. Soc. Siam **2** p. 215; Malay spp. p. 123, *perakensis* p. 124 Taiping Perak, *incertus* p. 125 Trang Siamese Malaya, **spp. n.**, KLOSS J. Fed. Malay Mus. **7**.

Paradoxurus nomenclature of & key to Indian & Burmese species p. 48, *birmanicus* **sp. n.** Upper Burma p. 51, WROUGHTON J. Bombay N. H. S. **25**; *bondar* de Blainville tenable name of *P. niger* Desmarest 1820 antedated by *Viverra nigra* Peale & Beauvois 1796, CABRERA Bol. Real. Soc. Esp. Hist. Nat. **17** p. 487.

HYAENIDAE.

Hyaena cuvieri Boitard 1845 the tenable name for the Cape Hyaena, CABRERA Bol. Real. Soc. Es. Hist. Nat. **17** p. 488.

CANIDAE.

Canis lupus remains from Grotta Guglielmo sul Palanzone, VECCHIO Atti Soc. ital. sc. nat. **55** p. 239.

†*Procynodictis* p. 214, *euzetensis* **sp. n.** p. 215 Ludien inferieur Euzet-les-Bains, DEPÉRET Ann. Univ. Lyon Fasc. **40**.

Thos riparius or perhaps *T. aureus riparius* Hemprich & Ehrenberg 1832 tenable name for *Canis variegatus* Cretzschmar (nec. Gmelin), CABRERA Bol. Real. Soc. Esp. Hist. Nat. **17** p. 488.

Vulpes alopex in Pleistocene of Sutherlandshire, NEWTON Proc. R. Soc. Edinburgh **37** p. 348; *corsac* "*nigra*" Kascenko antedated by *nigra* Borkhausen 1797, CABRERA Bol. Real. Soc. Esp. Hist. Nat. **17** p. 488.

URSIDAE.

Arcticonus gen. n. for *Ursus thibetanus* Cuvier, POCOCK Ann. Mag. N. H. **20** p. 129.

†*Ursavus elmensis* **sp. n.** Miocene Elm, STEHLIN Basel Verh. Natf. Ges. **28** p. 201.

Ursus arctos in Pleistocene of Sutherlandshire, NEWTON Proc. R. Soc. Edinburgh **37** p. 348.

MUSTELIDAE.

Development of heart & blood-vessels in the Ferret, WANG J. Anat. London **52** p. 107.

Ictonyx capensis limpopoensis **subsp. n.**, ROBERTS Ann. Transv. Mus. **5** p. 263.

Lutra vulgaris Pleistocene Sutherlandshire, NEWTON Proc. R. Soc. Edinburgh **37** p. 348.

Meles taxus in Pleistocene Sutherlandshire, NEWTON Proc. R. Soc. Edinburgh **37** p. 348.

Mustela lutreolina **sp. n.** W. Java, ROBINSON & THOMAS Ann. Mag. N. H. **20** p. 261; *erminea* & *vulgaris* in Pleistocene Sutherlandshire, NEWTON Proc. R. Soc. Edinburgh **37** p. 348.

†*Palaeogale* p. 439, *angustifrons* p. 440, *minuta* p. 447 Tertiary Allierbeckens, HELBING Basel Verh. Natf. Ges. **28**.

†*Plesictis stenoplesictoides* **sp. n.** Tertiary Allierbeckens, HELBING Basel Verh. Natf. Ges. **28** p. 457.

†*Stenogale* p. 450, *brevidens* p. 451 Tertiary Allierbeckens, HELBING Basel Verh. Natf. Ges. **28**.

B.—Pinnipedia.

Cystophora cristata in Florida, MILLER P. Biol. Soc. Washington **30** p. 121.

Phoca caspica os penis fractured & naturally reunited, ALPHERAKY P. Z. S. **1917** p. 251; *vitulina* ? Pleistocene Holderness, NEWTON Naturalist **1917** p. 105.

C.—† Creodontia.

†*Hyaenodon* p. 174, *heberti* p. 175, *nouleti* p. 188 **sp. n.** Bartonien Castrais, *requieni* p. 189, *minor* p. 201 rameaux phylétiques de genre p. 209, DEPÉRET Ann. Univ. Lyon Fasc. **40**.

†*Quercytherium* p. 164, *tenebrosum* p. 165, rapports et phylogénie p. 170, DEPÉRET Ann. Univ. Lyon Fasc. **40**.

†*Viverravus euzetensis* **sp. n.**, Ludien inferieur Euzet-les-Bains, DEPÉRET Ann. Univ. Lyon Fasc. **40** p. 246.

V.—RODENTIA.

Rodentia of Crimea, OGNEV Simferopol Bul. Soc. Nat. Crimée **5** p. 1; Crânes et développement anormal des incisives; NARBEL Arch. Sci. Phys. Genève **38** 1914.

SCIURIDAE & CASTORIDAE.

Callosciurus erubescens **sp. n.** Selangor, CABRERA Bol. Real. Soc. española **17** p. 518.

Callospermophilus lateralis caryi subsp. n. Wyoming, HOWELL P. Biol. Soc. Washington **30** p. 105.

Castor canadensis work in Zoological Gardens, POCOCK P.Z.S. **1917** p. 100.

Citellus (*Colobotis*) *musicus* Crimea, OGNEV Simferopol Bul. Soc. Nat. Crimee **5** p. 9; Ground Squirrel control, DIXON Univ. Cal. Pub. Agric. Exp. Sta. Circ. No. **181**.

Eutamias townsendi ochrogenys factors controlling its distribution, GRINNELL Amer. Nat. **51** p. 123.

Heliosciurus rufobrachiatus benga subsp. n., Cabo San Juan (Guinea Española), CABRERA Bol. Real. Soc. Española **17** p. 517.

Lariscus insignis fornicatus subsp. n., Pulau Tioman, Pahang, ROBINSON J. Fed. Malay. Mus. **7** p. 102.

Mesosciurus ferminae p. 49 Bueza, *candelensis sumaco* p. 51 San José, E. Ecuador **sp.** *et* **subsp. n.**, CABRERA Madrid Trab. Mus. Nac. Ci. Nat. **31**.

Pteromys habits, BABAULT Bul. Museum, Paris **22** p. 430.

Sciurus atrodorsalis thai subsp. n. Central Siam, KLOSS J. Nat. Hist. Soc. Siam **2** p. 285; *finlaysoni* Horsfield name applicable to squirrel of Si-Chang Island, *portus* Kloss a synonym; *tachardi* Robinson the tenable name of mainland form, THOMAS J. Nat. Hist. Soc. Siam **2** p. 343; demurrer by KLOSS *ibid.* p. 345.

Tomeutes tenuis tiomanicus subsp. n., Pulau Tioman, Pahang, ROBINSON J. Fed. Malay Mus. **7** p. 103.

DIPODIDAE & GLIRIDAE.

Alactaga saliens Crimea, OGNEV Simferopol Bul. Soc. Nat. Crimée **5** p. 54.

Alactagulus acontion Crimea, OGNEV Simferopol Bul. Soc. Nat. Crimée **5** p. 55.

Dyromys nitedula subsp. ? Crimea, OGNEV Simferopol Bul. Soc. Nat. Crimée **5** p. 11.

Scirtopoda telum falz-feini Taurus Gouv., OGNEV Simferopol, Bul. Soc. Nat. Crimée **5** p. 53.

Sicista nordmanni Crimea, OGNEV Simferopol, Bul. Soc. Nat. Crimée **5** p. 49.

MURIDAE.

Acomys flavidus **sp. n.** Sind, THOMAS J. Bombay N.H.S. **25** p. 205.

Aconaemys porteri **sp. n.** Osorno, S. Chili, THOMAS Ann. Mag. N.H. **19** p. 281.

Akodon surdus Huadquiña Peru **sp. n.**, THOMAS Smithsonian Misc. Coll. **68** No. 4 p. 2; *arenicola hunteri* subsp. n., delta of Parana, THOMAS Ann. Mag. N.H. **20** p. 97.

Arvicola amphibius reta ? in Pleistocene of Sutherlandshire, NEWTON Proc. R. Soc. Edinburgh **37** p. 348; *terrestris* sbsp., Crimea, OGNEV Simferopol Bul. Soc. Nat. Crimée **5** p. 45 (see also under *Microtus*).

Chilotus socialis parvus Crimea, OGNEV Simferopol, Bul. Soc. Nat. Crimée **5** p. 43.

Chroeomys inornatus Ollataytambo Peru, **sp. n.**, THOMAS Smithsonian Misc. Coll. **68** No. 4, p. 2.

Cricetiscus **gen. n.** for *Cricetulus campbelli* (Genotype) & *sungorus*, THOMAS Ann. Mag. N. H. **19** p. 456.

Cricetulus phaeus neglectus "aberr. nov.," p. 33, *arenarius* p. 37, Crimea, OGNEV Simferopol Bul. Soc. Nat. Crimee **5**; *migratorius vernula* p. 453 Khotz, Trebizond, *alticola* p. 455 Ladak, subsp. *et* **sp. n.**, THOMAS Ann. Mag. N.H. **19**; see also under *Cricetiscus*.

Cricetus cricetus Crimea, OGNEV Simferopol Bul. Soc. Nat. Crimée **5** p. 30.

Delomys **gen. n.** p. 196, for *Hesperomys dorsalis*, *d. collinus* p. 197 subsp. n. N.E. Sao Paulo, THOMAS Ann. Mag. N.H. **20**.

Deltamys kempi **gen.** *et* **sp. n.** delta of Parana, THOMAS Ann. Mag. N. H. **20** p. 98.

Dicrostonyx torquatus in Pleistocene of Sutherlandshire, NEWTON Proc. R. Soc. Edinburgh **37** p. 348.

Diomys p. 203 *crumpi* p. 204 **gen.** *et* **sp. n.** Pareshnath, Hazaribagh, THOMAS J. Bombay N. H. S. **25**.

Ellobius talpinus Crimea OGNEV Simferopol Bul. Soc. Nat. Crimée **5** p. 46.

Epimys norvegicus, *rattus alexandrinus*, Crimea, OGNEV Simferopol Bul. Soc. Nat. Crimée **5** p. 15.

Evotomys glareolus in Pleistocene of Sutherlandshire, NEWTON Proc. R. Soc. Edinburgh **37** p. 348.

Fiber zibethicus parasites, MRÁZEK J. Parasitology Urbana Ill. **1** p. 104.

Guyia **gen. n.** for *Millardia kathleenae* Burma (Dry Zone), THOMAS J. Bombay N.H.S. **25** p. 201.

Hesperomys frida Chospyoc, *carillus marcarum* Lauramarca, Peru subsp. *et* **sp. n.**, THOMAS Smithsonian Misc. Coll. **68** No. 4 p. 1.

Inomys **gen. n.** for *Oryzomys incanus*, THOMAS Ann. Mag. N.H. **20** p. 197.

Malacothrix typicus fryi **subsp. n.** ROBERTS Ann. Transv. Mus. **5** p. 263.

Micromys minutus Crimea, OGNEV Simferopol, Bul. Soc. Nat. Crimée **5** p. 29.

Microryzomys **subgen. n.** of *Oryzomys* (Genotype *O. minutus* Tomes), (*M.*) *aurillus* **sp. n.** Torontoy Peru, THOMAS Smithsonian Misc. Coll. **68** No. 4 p. 1.

Microtus philistinus **sp. n.** Ekron S.E. of Jaffa Palestine, THOMAS Ann. Mag. N. H. **19** p. 450; *montanus caryi* subsp. n. Wyoming, BAILEY P. Biol. Soc. Washington **30** p. 29; *arvalis* Crimea, OGNEV Simferopol Bul. Soc. Nat. Crimée **5** p. 37; *agrestis* & *ratticeps* in Pleistocene of Sutherlandshire, NEWTON Proc. R. Soc. Edinburgh **37**, p. 348; *amphibius* primordial cranium FAWCETT J. Anat. London **51** p. 309.

Microxus torques Matchu Picchu, Peru **sp. n.**, THOMAS Smithsonian Misc. Coll. **68** No. 4 p. 3.

Millardia meltada dunni subsp. n. Amballa Punjab, THOMAS J. Bombay N.H.S. **25** p. 202.

Mus musculus oogenesis, KINGERY J. Morph. **30** p. 261; fate of unfertilized egg, CHARLTON Biol. Bull. Wood's Hole **33** p. 321; dominance and recessivité

RABAUD Paris Bul. Soc. Zool. 42 p. 87; *musculus hortulanus* p. 16, *flavicollis flavicollis* and *sylvaticus* subsp. ? p. 23, Crimea, OGNEV Simferopol Bul. Soc. Nat. Crimée **5**; *norvegicus albinus* synapsis in egg, PRATT & LONG J. Morph. **29** p. 441; *concolor* Biologie, OTTEN Batavia, Geneesk. Tydschr. Ned. Ind. **57** p. 534.

Mylomys christyi **sp. n.** Bahr-el-Ghazal, THOMAS Ann. Mag. N.H. **20** p. 362.

Neotoma cinerea lucida subsp. n. Charleston Mts., Nevada, GOLDMAN P. Biol. Soc. Washington **30** p. 111.

Ondatra (*Fiber*) *zibethicus* economics, RITZEMA BOS Tyds. Plantenz. **23** p. 47.

Oryzomys delticola **sp. n.** delta of Parana, THOMAS Ann. Mag. N.H. **20** p. 96; see also *Microryzomys*.

Peromyscus eremicus papagensis subsp. n., Sonora, Mexico, GOLDMAN P. Biol. Soc. Washington **30** p. 110.

Phaenomys **gen. n.** for *Oryzomys ferrugineus*, THOMAS Ann. Mag. N.H. **20** p. 196.

Rattus culturatus p. 198 Mt. Arizan Formosa, *confucianus chihliensis* p. 190 Imperial Tombs Pekin, **sp.** *et* **subsp. n.**, THOMAS Ann. Mag. N.H. **20**; *lepturus* p. 93, *bartelsi* p. 95, description and measurements of specimens from W. Java, RONINSON J. Fed. Malay Mus. **7**; *rattus thai* subsp. n., Central Siam, KLOSS J. Nat. Hist. Soc. Siam **2** p. 286. (See also under *Epimys* and *Mus*.)

Rhagomys **gen. n.** for *Hesperomys rufescens*, THOMAS Ann. Mag. N.H. **20** p. 192.

Rhipidomys characters of genus and list of species, THOMAS Ann. Mag. N.H. **20** p. 194.

Synaptomys cooperi fatuus in Maine, COPELAND & POPE P. Biol. Soc. Washington **30** p. 159.

Tatera key to Indian species p. 42, *sherrini* Sind, *dunni* Punjab **spp. n.** p. 43, WROUGHTON J. Bombay N.H.S. **25**.

Taterona **gen. n.** for African Gerbils (genotype *T. afra* = *Gerbillus afer*, Gray), WROUGHTON J. Bombay N.H.S. **25** p. 40.

Tautatus p. 279, *thai* p. 280, **gen.** *et* **sp. n.** Siam, KLOSS J. Nat. Hist. Soc. Siam. **2**.

Thomasomys generic characters and list of species, THOMAS Ann. Mag. N.H. **20** p. 194; *notatus* Torontoy, *gracilis* Matchu Picchu, *daphne* Ocobamba Valley, Peru, **spp. n.**, THOMAS Smithsonian Misc. Coll. **68** No. 4 p. 2.

SPALACIDAE, GEOMYIDAE, HETEROMYIDAE, & BATHYERGIDAE.

Gopher control, DIXON & DE ONG Univ. Cal. Pub. Bul. Coll. Agric. Exp. Sta. No. **281**.

Georychus komatiensis p. 272, *rufulus* p. 273, *stellatus* p. 272, *vandami* p. 273, *vryburgensis* p. 274 **5**; *palki* p. 5 **6**, ROBERTS Ann. Trans. Mus. Pretoria; notes on characters, and criticism of Austin Roberts' work, THOMAS Ann. Mag. N.H. **20** p. 441.

Heliophobius angonicus **sp. n.** Angoniland, Rhodesia, THOMAS Ann. Mag. N.H. **20** p. 314.

Perodipus ordii luteolus subsp. n., Wyoming, GOLDMAN P. Biol. Soc. Washington **30** p. 112.

Perognathus parvus clarus p. 147 Wyoming, *P. flavus* p. 148 subspp. n. Wyoming, GOLDMAN P. Biol. Soc. Washington **30**.

Spalax monticola insularis subsp. n. I. of Lemnos, THOMAS Ann. Mag. N.H. **20** p. 315; *typhlus* and *microphthalmus* Crimea, OGNEV Simferopol, Bul. Soc. Nat. Crimée **5** p. 47.

HYSTRICIDAE, CAVIDAE, &c.

†*Boromys torrei* **sp. n.** Pleistocene cave Matanzas Cuba, ALLEN Bul. Mus. Comp. Zool. Harvard **61** p. 6.

Cavia notes on species p. 152, *rosida* p. 154 E. Parana, *tschudii umbrata* p. 157 Central Peru, *t. pallidior* p. 158 Arequipa, *nana* Bolivian Highlands, **spp.** *et* **subspp. n.**, THOMAS Ann. Mag. N.H. **19**; *rufescens*, *porcellus* and crosses, DETLEFSEN Washington Carnegie Inst. Pub. No. **205** p. 134.

Dasyprocta punctata nuchalis Panama p. 113, *p. richmondi* p. 114 Nicaragua, subspp. n., GOLDMAN P. Biol. Soc. Washington **30**; *fuliginosa mesatia* subsp. n., Tarapoto, Ecuador, CABRERA Madrid Trab. Mus. Nac. Ci. Nat. **31** p. 53; *aguti lunaris* subsp. n. Moon Mountains, S. British Guiana p. 259; *felicia* p. 310 Paraguay, *azarae catrinae*

p. 311 S. Brazil, *variegata boliviae* p. 312 S. Bolivia, *pandora* p. 313 I. of Gorgona, **spp.** *et* **subspp. n.**, THOMAS Ann. Mag. N.H. **20**.

†*Elasmodontomys* relationships tooth structure, ANTHONY Bul. Amer. Mus. N.H. **37** p. 185.

Geocapromys cubanus **sp. n.** Pleistocene cave Matanzas Cuba, ALLEN Bul. Mus. Comp. Zool. Harvard **61** p. 9.

†*Heptaxodon bidens* **gen.** *et* **sp. n.**, Cave Porto Rico, ANTHONY Bul. Amer. Mus. N.H. **37** p. 183.

†*Heteropsomys* relationships, ANTHONY Bul. Amer. Mus. N.H. **37** p. 187.

†*Homopsomys antillensis* **gen.** *ei* **sp. n.**, Cave Porto Rico, ANTHONY Bul. Amer. Mus. N.H. **37** p. 187.

Synodontomys **gen. n.** for *Capromys columbianus* Chapman, ALLEN Bul. Mus. Comp. Zool. Harvard **61** p. 5.

†*Trechomys* p. 159, *euzetensis* **sp. n.** p. 160 Ludien inferieur Euzet-les-Bains, DEPÉRET Ann. Univ. Lyon Fasc. **40**.

LEPORIDAE & OCHOTONIDAE.

Size inheritance in rabbits, MACDOWELL Washington Carnegie Inst. Pub. No. **196** p. 55.

Lepus timidus seasonal change of colour, ABE Dobuts. Z. Tokyo **29** pp. 201, 226, 269; *variabilis scoticus* ? in Pleistocene of Sutherlandshire, NEWTON Proc. R. Soc. Edinburgh **37** p. 348; *rajput* **sp. n.** Rajputana, WROUGHTON J. Bombay N.H.S. **25** p. 361; (*Eulagos*) *europaeus transsylvanicus* Crimea, OGNEV Simferopol Bul. Soc. Nat. Crimée **5** p. 55.

Ochotona factors controlling distribution of Californian species, GRINNELL Amer. Nat. **51** p. 120; *schisticeps muiri* habits and enemies, GRINNELL & STORER Sierra Cl. Bul. **10** p. 159.

Oryctolagus cuniculus algirus Loche antedates *O. c. huxleyi* Haeckel for Porto Santo and Iberian rabbit p. 369, *brachyotus* p. 371 subsp. n. La Camargue (Bouches-du-Rhône), and note on le lapin des Cyclades Grecques, TROUESSART Bul. Museum Paris **1917**.

Sylvilagus gabbi consobrinus subsp. n. Panama, ANTHONY Bul. Amer. Mus. N.H. **37** p. 335.

VI.—UNGULATA.

A.—Artiodactyla.

Bipartizione del lacrimale **30** No. 707; partizione del nasale **31** No. 709; accessory bones in intermaxillary and maxillo-nasal regions **31** No. 710, CAMERANO Boll. Mus. Zool. Anat. Torino; appendice urétral **30** p. 178; development and homologies of gland, RETTERER & NEUVILLE C.R. soc. biol. Paris **80** p. 339; Erythrocyten und Verhältnis zu den Blutplättchen, LENZE Diss. Bern Arnswalde 1909; Vererbung von Missbildungen und Krankheiten, DÜRST Zürich Vierteljahrschr. Natf. Ges. **58**; selection and inheritance (chiefly in goats) see papers by FANTUZZI, GIANETTONI, MOLO & ROSSI Agricolt. Ticinese Lugano **40**, **41** and **42**.

BOVIDAE.

Gehörn, Verhältnis zu dem anderer Cavicornia und der Hirsche, BOAS København Kgl. Danske Vidensk. Selsk. Biologiske Medd. **1** (2) p. 1.

Bos caffer colour phases in Uelle region, CALONNE-BEAUFAICT Rev. Zool. Africaine **4** p. 186; *sondaicus* and *B. s. porteri* note on, GAIRDNER J. Nat. Hist. Soc. Siam **2** p. 250.

Capra characters and status of Iberian species and races **32** No. 720; *sibirica* characters of subspecies **32** Nos. 722 and 723, CAMERANO Boll. Mus. Zool. Anat. Torino; †*lusitanica* characters and history, FRANÇA Arquiv. Univers. Lisboa **4** p. 19; (*Euibex* and *Eucapra*) horns and coloration in these subgenera, CAMERANO Atti Acc. sc. Torino **52** p. 231.

Capricornis Chinese Serows (*argyrochaetes*, *vidianus*, *milne-edwardsi*, *collasinus* and *rocherianus* valid species), SOWERBY P.Z.S. **1917** p. 20.

Cobus defassa colour phases in Uelle Region, CALONNE-BEAUFAICT Rev. Zool. Africaine **4** p. 183.

Nemorhaedus Chinese Gorals (*cinereus*, *griseus*, *niger*, *henryanus*, *arnouxianus*, *caudatus*, and *raddeanus* valid species), SOWERBY P.Z.S. **1917** p. 24.

Oreotragus oreotragus transvaalensis **subsp. n.**, ROBERTS Ann. Transv. Mus. **5** p. 276.

Ovis atrophy of right superior *vena cava*, CALVET Bul. Soc. Zool. France **42** p. 81; penis et gland, RETTERER & NEUVILLE C.R. soc. biol. Paris **80** 1917 p. 287; *orientalis urmiana* skulls and horns from Koyun-Dagh Id., SMIRNOV Bul. Mus. Cauc. **10** p. 273; *platyura* origin, YOUNG J. Hered. Washington **5** p. 445; evolution of sheep, TILLETT Ottawa Nat. **29** p. 90.

Rupicapra rupicapra parva Cabrera a subspecies or var. of *R. pyrenaica*, CAMERANO Boll. Mus. Zool. Anat. Torino **31** No. 172.

CERVIDAE & GIRAFFIDAE.

Cervus Chinese species of Sika (*C. kopschi*, *mantchuricus*, *dybowskii*, *mandarinus*, and *dugennianus* valid species), SOWERBY P.Z.S. **1917** p. 16; *alces* brain, BESPALOFF Folia neuro-biologica Haarlem **10** p. 159; *elaphus* and *tarandus* in Pleistocene of Sutherlandshire, NEWTON Proc. R. Soc. Edinburgh **37** p. 348; damage caused in woods by deer, BOAS København Fra Naturens Værksted **5** p. 161.

Okapia johnstoni viscera, BURNE P.Z.S. **1917** p. 187.

Rangifer tarandus Pleistocene Holderness, NEWTON Naturalist **1917** p. 105.

CAMELIDAE.

Camel and dromedary hybrid, YATSU Dobuts. Z. Tokyo **29** p. 15.

Lama vicugna mensalis subsp. n. Incapirca, Junin, Peru (and Bolivia), THOMAS Smithsonian Misc. Coll. **68** No. 4 p. 3.

SUIDAE & DICOTYLIDAE.

†*Cebochaerus* p. 102, *minor* p. 105, rapports et phylogénie p. 110, DEPÉRET Ann. Univ. Lyon Fasc. **40.**

†*Chaeropotamus depereti* p. 92 rapports et phylogénie p. 98, DEPÉRET Ann. Univ. Lyon Fasc. **40.**

Sus Heude's Chinese species (*paludosus*, *moupinensis*, *gigas*, *coreanus*, and *meles* probably valid), SOWERBY P.Z.S. **1917** p. 12; *scrofa* diploid chromosome complexes, HANCE J. Morph. **30** p. 155; Irish "Greyhound" pig history, skulls, and modern representatives, SCHARFF Irish Nat. **26** p. 173.

Pecari tajacu modestus subsp. n., Tarapoto, Ecuador, CABRERA Madrid Trab. Mus. Nac. Ci. Nat. **31** p. 57; *angulatus bangsi* subsp. n., E. Panama, GOLDMAN P. Biol. Soc. Washington **30** p. 109.

EXTINCT FAMILIES.

†*Brachyodus onoideus* Miocene Elm, STEHLIN Basel Verh. Natf. Ges. **28** p. 192.

†*Dacrytherium* p. 114, *ovinum* p. 116, rapports et phylogénie p. 122, DEPÉRET, Ann. Univ. Lyon Fasc. **40.**

†*Dichodon* p. 147, *cervinum* p. 149, rapports et phylogénie p. 155, DEPÉRET Ann. Univ. Lyon Fasc. **40.**

†*Haplomeryx* p. 138, *euzetensis* **sp. n.**, p. 140 Ludien inférieur Euzet-les-Bains. rapports et phylogénie p. 144, DEPÉRET Ann. Univ. Lyon Fasc. **40.**

†*Leptotheridium* p. 125, *lugeoni* p. 126, rapports et phylogénie p. 130, DEPÉRET Ann. Univ. Lyon Fasc. **40.**

†*Xiphodon* p. 133, *intermedium* p. 133, rapports et phylogénie p. 136, DEPÉRET Ann. Univ. Lyon Fasc. **40.**

B.—Perissodactyla.

EQUIDAE.

†*Anchilophus dumasi* p. 63 phylogeny p. 73, DEPÉRET Ann. Univ. Lyon Fasc. **40.**

†*Anchitherium aurelianense* Miocene Elm, STEHLIN Basel Verh. Natf. Ges. **28** p. 197.

Equus lambei **sp. n.**, skull Pleistocene Yukon Territory, HAY Proc. U.S. Nat. Mus. **53** p. 435; "*Equus adamiticus* **sp. nov.**, sub nom. *E. Larteti*" Pleistocene Olmo, Arezzo, SERGI Riv. Antropologia **21** p. 7 (of reprint); *caballus* figures of Celtic and Norse horses, CHUBB Zool. Soc. Bul. New York **20** p. 1449; development during third week, EWART Trans. R. Soc. Edinburgh **51** p. 287; model of 21 day embryo, ROBINSON & GIBSON Trans. R. Soc. Edinburgh **51** p. 331; bones and teeth

from prehistoric site at Ipswich, EWART in Moir J. R. Anthrop. Inst. **47** p. 379; Coloration and striping in Russian horses, KRIEG Zool. Anz. **49** p. 197; psychology, SØRENSEN København Gads Magasin **10** p. 619.

†*Lophiotherium cervulum* p. 77, phylogeny p. 86, DEPÉRET Ann. Univ. Lyon Fasc. **40**.

RHINOCEROTÏDAE.

†*Rhinoceros antiquitatis* lower jaw from Pleistocene of Schaffhausen, HESCHELER Zurich Vierteljahrsch. natf. Ges. **62** p. 319.

EXTINCT FAMILIES.

†*Palaeotherium crassum* p. 12, *stehlini* **sp. n.** Euzet-les-Bains p. 37 Ludien inferieur, DEPÉRET Ann. Univ. Lyon Fasc. **40**.

†*Plagiolophus annectens* p. 41 phylogeny, DEPÉRET Ann. Univ. Lyon Fasc. **40**.

†*Titanoides primaevus* **gen.** *et* **sp. n.**, lower jaw and teeth from Paleocene (Fort Union), North Dakota, GIDLEY Proc. U.S. Nat. Mus. **52** p. 431.

C. and *D.*—Hyracoidea and Proboscidea.

Proboscidea dental characters of fossil and recent, phylogeny and extinction, AIRAGHI Mem. Soc. ital. sc. nat. **8** p. 191.

Elephas africanus, Anatomie vom Fetus, BOLK Amsterdam Verh. K. Acad. Wet. 2e Sect. **19** p. 1; ? *trogontherii* figures of molar from Jersey Cave, MARETT Archaeologia **67** pl. xiv; †*primigenius* synonymy and dentition, Italian specimens, AIRAGHI Mem. Soc. ital. sc. nat. **8** p. 234.

Euelephas †*namadicus* synonymy and dentition, AIRAGHI Mem. Soc. ital. sc. nat. **8** p. 229.

†*Gomphotherium elegans* **sp. n.**, lower molar Pleistocene (Sheridan Beds) Kansas, HAY Proc. U.S. Nat. Mus. **53** p. 219.

†*Loxodon meridionalis* dentition p. 209, †*antiquus* p. 217, AIRAGHI Mem. Soc. ital. sc. nat. **8**.

VII & VIII.—SIRENIA & CETACEA.

Whales and whaling, ANDREWS **12**; British stranded whales, HARMER **104**; Whalebone whales of New England, ALLEN Mem. Boston Nat. Hist. Soc. **8** p. 107; myology of Cetacean flipper, ANTHONY Arch. Zool. Exper. Paris **56** p. 359.

Balaenoptera borealis near Villanueva de Arosa, BUHIGAS Bol. Soc. Esp. Hist. Nat. Madrid **17** p. 231; *acutorostrata* osteology, M'INTOSH J. Zool. Research **2** p. 37.

Mesoplodon myology of flipper, ANTHONY Arch. Zool. Exper. Paris **56** p. 359; †*compressus* Tertiary Australia, CHAPMAN Proc. R. Soc. Vict. **30** p. 35.

†*Parasqualodon wilkinsoni* Tertiary Australia, CHAPMAN Proc. R. Soc. Vict. **30** p. 40.

†*Physetodon baileyi* Australian Tertiary, CHAPMAN Proc. R. Soc. Victoria **30** p. 33.

†*Scaldicetus lodgei* **sp. n.** Oligocene Victoria, CHAPMAN Proc. R. Soc. Vict. **30** p. 34.

Steno cudmorei **sp. n.**, Lower Pliocene Australia, CHAPMAN Proc. R. Soc. Vict. **30** p. 41.

Tursiops tursio at Walney Island, BOOTH Naturalist **1917** p. 300.

"*Ziphius* (*Dolichodon*) *geelongensis*" note on, CHAPMAN Proc. R. Soc. Vict. **30** p. 40.

IX.—EDENTATA.

Bradypus nomenclature characters and distribution of species p. 352, *macrodon* p. 356 Oriente of Ecuador, *violeta* p. 357 Balzar Mts., W. Ecuador, THOMAS Ann. Mag. N.H. **19**.

Scaeopus, Peters, available generic name for *Bradypus torquatus*, THOMAS Ann. Mag. N.H. **19** p. 352.

X.—MARSUPIALIA.

Development of hypophysis cerebri and pre-oral gut, PARKER J. Anat. London **51** p. 181; cytomorphosis of enamel-organ, CARTER Phil. Trans. B.

208 p. 271; anatomy of gastro-intestinal tract, MACKENZIE J. Anat. London **51** p. 000 and 278.

Didelphis marsupialis particeps subsp. n. San Miguel Island, Panama, GOLDMAN P. Biol. Soc. Washington **30** p. 107.

Macropus, Kangaroos in captivity, WHITE Austral. Zool. **1** p. 83.

Marmosa mexicana savannarum subsp. n., Panama, GOLDMAN P. Biol. Soc. Washington **30** p. 108.

Orolestes inca gen. *et* sp. n., Torontoy, Peru, THOMAS Smithsonian Misc. Coll. **68** No. 4 p. 3.

XI.—MONOTREMATA.

Anatomy of gastro-intestinal tract, MACKENZIE J. Anat. London **51** p. 000 and 278; deposition of eggs, BURRELL Austral. Zool. **1** p. 87.

Tritylodon the most primitive of mammals, skull, PETRONIEVICS Ann. Mag. N.H. **20** p. 283.

INDEX TO NAMES

OF

NEW GENERA AND SUBGENERA

RECORDED IN THIS VOLUME

(INCLUDING NEW NAMES FOR GENERA PREVIOUSLY ESTABLISHED).*

Abagous *Sharp* Ins. 109
Abrotheus *Broun* Ins. 109
Abura *Matsumura* Ins. 210
Acanthedra *Meyrick* Ins. 179
Acanthentedon *Dodd* Ins. 132
Acanthionella *Canu & Bassler* Bry., Brach. 12
Acanthocallis *Matsumura* Ins. 210
Acanthocella *Canu & Bassler* Bry., Brach. 12
Acanthocleithron *Nichols & Gaiscom* Pisces 14
Acanthodotheca *Townsend* Ins. 194
Acanthopupa *Wenz* Moll. 47
Aceratoneuromyia *Girault* Ins. 132
Acreotrichites *Cockerell* Ins. 192
Acridiophaga *Townsend* Ins. 194
Acrolichanus *Ward* Verm. 16
Acronca *Barnes & McDunnough* Ins. 171
Acropezum *Alluaud* Ins. 87
Adelopygus *Desbordes* Ins. 93
Adenifera *Canu & Bassler* Bry., Brach. 12
Adleria *Rohwer & Fagan* Ins. 138
Adolendana *Distant* Ins. 205
Adorrhinyptia *Arrow* Ins. 96
Adriaria *Pallary* Moll. 41
Aechmella *Canu & Bassler* Bry., Brach. 12
Aegerina *Le Cerf* Ins. 148
Aegerosphecia *Le Cerf* Ins. 148
Aeolagrion *Williamson* Ins. 219
Aeronectris *Meyrick* Ins. 179
Agatyrus *Broun* Ins. 92
Agdistopsis *Hampson* Ins. 171
Aglaopteryx *Hebard* Ins. 222
Aglaotomidea *Rohwer & Fagan* Ins. 138
Airograptus *Ruedemann* Coel. 8
Akamptogonus *Attems* Myr., Arachn. 22
Alalomantis *Giglio-Tos* Ins. 223
Alassostoma *Stunkard* Verm. 16
Alcicornis *MacCullum* Verm. 16
Aleirhogas *Baker* Ins. 130
Aleurodaphis *Van der Goot* Ins. 210
Alexandraspis *Lambert & Thiéry* Echin. 13
Allantella *Hallman* Por. 3
Allaorops *Broun* Ins. 109
Allochares *Banks* Ins. 122
Allochlorodes *Prout* Ins. 164
Allomops *Allen* Mam. 20
Allonychella *Silvestri* Ins. 226
Alloperdita *Viereck* Ins. 120
Amallectis *Meyrick* Ins. 177
Amarginops *Nichols & Griscom* Pisces 14
Ambarvalia *Distant* Ins. 205
Amblycoryphenes *Townsend* Ins. 194
Amiscogaster *Girault* Ins. 132
Ampheremus *Fall* Ins. 99
Amphiacantha *Matsumoto* Echin. 22
Amphichilus *Matsumoto* Echin. 22
Amphisamytha *Hessle* Verm. 25
Amphisticta *Sjöstedt* Ins. 219

* The total number of names in this index is 1,131; distributed as follows, viz.:—*Protozoa* 13; *Porifera* 12; *Coelenterata* 13; *Echinoderma* 52; *Vermidea* 48; *Bryozoa* 64; *Brachiopoda* 9; *Mollusca* 67; *Crustacea* 20; *Arachnida* 46; *Myriopoda* 17; *Insecta* 680; *Pisces* 28; *Reptilia* 15; *Aves* 25; *Mammalia* 22. The total last year was 1,598.

Anagyropsis *Girault* Ins. 132
Ananusia *Girault* Ins. 132
Anasigerpes *Giglio-Tos* Ins. 223
Anauchen *Pilsbry* Moll. 47
Anawixia *Chamberlin* Arachn. 15
Ancyrobdella *Oka* Verm. 27
Andiniravinia *Townsend* Ins. 194
Anegcephalesis *Dyar* Ins. 171
Anepsiotes *Kleine* Ins. 113
Anobostra *Hampson* Ins. 171
Anommonia *Schmitz* Ins. 198
Anomoxena *Meyrick* Ins. 179
Anoplanomala *Arrow* Ins. 97
Anorthoscutum *Lambert* & *Thiéry* Echin. 13
Antimitra *Iredale* Moll. 30
Anuraphis *Del Guercio* Ins. 210
Anxietas *Iredale* Moll. 41
Apaturris *Iredale* Moll. 30
Aphantophryne *Fry* Rept. 12
Apithecia *Prout* Ins. 164
Apodrassus *Chamberlin* Arachn. 15
Aproctonema *Keilin* Verm. 20
Aquaelicium *Distant* Ins. 205
Arachnastraea *Yabe* & *Hayasaka* Coel. 9
Arakawana *Matsumura* Ins. 210
Arborella *Osburn* Bry., Brach. 12
Archaegopis *Wenz* Moll. 45
Archaeonycteris *Revilliod* Mam. 20
Archipetalia *Tillyard* Ins. 219
Arcticonus *Pocock* Mam. 21
Arebius *Chamberlin* Myr., Arachn. 21
Areocosma *Meyrick* Ins. 179
Argoravinia *Townsend* Ins. 194
Arimatria *Matsumura* Ins. 210
Armilustrium *Distant* Ins. 205
Arpediomimus *Cameron* Ins. 91
Arpediopsis *Cameron* Ins. 91
Arthrochthonius *Ewing* Arachn. 17
Aselgeoides *Distant* Ins. 205
Ashfordia *Taylor* Moll. 46
Aspidaphis *Gillette* Ins. 210
Astaudes *Wade* Moll. 35
Astrocles *Fisher* Echin. 19
Astrolliris *Fisher* Echin. 19
Atactopsis *Townsend* Ins. 194
Atlasica *Pallary* Moll. 46
Atopidocyphon *Pic* Ins. 100
Atropocarus *Ewing* Arachn. 17
Auchmerina *Enderlein* Ins. 209
Aulina *Smith* Coel. 9
Auromantis *Giglio-Tos* Ins. 223
Austrobilharzia *Johnston* Verm. 16
Austrolaenilla *Bergstrom* Verm. 25
Austromantispa *Esben-Petersen* Ins. 185
Austromenidia *Hubbs* Pisces 17
Austropassalus *Mjöberg* Ins. 95
Austrosalius *Turner* Ins. 122
Axidragma *Hallman* Por. 3
Axinectya *Hallman* Por. 4
Axiodeancia *Clark* Brach. 4
Aymarella *Chamberlin* Arachn. 14

Banksiella *Muir* Ins. 205
Banya *Schouteden* Ins. 201
Barrukia *Bergstrom* Verm. 25
Basanaedus *Pic* Ins. 103
Bathosella *Canu* & *Bassler* Bry., Brach. 12
Bathynoe *Ditlevsen* Verm. 25
Bathyparia *Lamb* Ins. 198
Brunella *Forel* Ins. 126
Belapha *Enderlein* Ins. 216
Belaster *Spencer* Echin. 19
Benia *Schouteden* Ins. 201
Bercaeopsis *Townsend* Ins. 194
Bethylitella *Cockerell* Ins. 138
Biaka *Joicey* & *Talbot* Ins. 146
Blaesoxiphotheca *Townsend* Ins. 194
Blatticephalus *Heller* Ins. 104
Blattotetrastichus *Girault* Ins. 133
Boltenella *Wade* Moll. 32
Borborothinia *Townsend* Ins. 194
Borneocamaria *Pic* Ins. 103
Brachaciptera *Lea* Ins. 114
Brachydoxa *Meyrick* Ins. 179
Brachyhedybius *Pic* Ins. 100
Brachyrhabdus *Aurivillius* Ins. 114
Brachyspathus *Wickham* Ins. 99
Branchioica *Eigenmann* Pisces 15
Brasilium *Pic* Ins. 104
Brisingella *Fisher* Echin. 19
Brisingenes *Fisher* Echin. 19
Brouzetia *Cossmann* Moll. 35
Bryodrassus *Broun* Ins. 109
Bulbocephalus *Watson* Prot. 23
Burmacrocera *Cockerell* Ins. 187
Burmitempis *Cockerell* Ins. 192
Bustomum *Lane* Verm. 20

Calamops *Sinclair* Rept. 13
Callanaitis *Iredale* Moll. 54
Callisphecia *Le Cerf* Ins. 148
Callithia *Le Cerf* Ins. 148
Callixestis *Meyrick* Ins. 179
Callocorydon *Mathews* Aves 47
Calobatinus *Silvestri* Ins. 226
Calometopidius *Bourgoin* Ins. 98
Calopelma *Chamberlin* Arachn. 13
Calospilota *Giglio-Tos* Ins. 223
Calotachytes *Turner* Ins. 123
Calydoniomorpha *Pic* Ins. 103
Camelomantis *Giglio-Tos* Ins. 223
Campanilopa *Iredale* Moll. 35
Campsiomorpha *Pic* Ins. 103
Camptopelta *Williston* Ins. 191
Camptopsis *Townsend* Ins. 195
Capanica *Meyrick* Ins. 179

Caractacaster *Spencer* Echin. 19
Cardiataxis *Lambert* Echin. 14
Cardiodectes *Wilson* Crust. 20
Carlyleia *Girault* Ins. 133
Carmentalia *Distant* Ins. 205
Carphuromorphus *Pic* Ins. 100
Carphurotroglops *Pic* Ins. 100
Carsidaroida *Crawford* Ins. 209
Cataspilota *Giglio-Tos* Ins. 223
Cathalistis *Meyrick* Ins. 179
Caucasicola *Hesse* Moll. 49
Cecalymenus *Enderlein* Ins. 216
Celaenura *Kennedy* Ins. 219
Celestica *Meyrick* Ins. 179
Centrolysmus *Navás* Ins. 185
Cephalosimus *Chabanaud* Rept. 10
Ceratoglyphina *Van der Goot* Ins. 210
Ceratotrix *Weise* Ins. 116.
Cercocladia *Draudt* Ins. 152
Ceropsilopa *Cresson* Ins. 198
Cervaphis *Van der Goot* Ins. 210
Cetheromma *Jeannel* Ins. 203
Chaetoravinia *Townsend* Ins. 195
Chaetosturmia *Villeneuve* Ins. 195
Chamanthedon *Le Cerf* Ins. 148
Cheilonereis *Benham* Verm. 25
Chelyrhynchus *Haughton* Rept. 11
Cheneosaurus *Lambe* Rept. 11
Cheriocercus *Eigenmann* Pisces 14
Chitaspis *Annandale* Bry., Brach. 12
Chirodiscoides *Hirst* Arachn. 19
Chloroidia *Townsend* Ins. 195
Chloroneura *Laidlaw* Ins. 219
Chloropetella *Roberts* Aves 53
Chlororhinia *Townsend* Ins. 195
Chromadorissa *Filipjev* Verm. 20
Chrysocneme *Draudt* Ins. 152
Ciliagrion *Sjöstedt* Ins. 219
Circoniscus *Pearse* Crust. 18
Circoporella *Hayasaka* Coel. 8
Cistudinomyia *Townsend* Ins. 195
Cithara *MacCullum* Verm. 16
Clarkona *Mathews* Aves 48
Clathurina *Melvill* Moll. 30
Climacura *Howard, Dyar & Knab* Ins. 188
Clusivius *Distant* Ins. 205
Cnemidophyllum *Rehn* Ins. 225
Coccaster *Spencer* Echin. 19
Coccodiplosis *de Meyere* Ins. 187
Coccothorax *Aurivillius* Ins. 114
Cochisea *Barnes & McDunnough* Ins. 165
Coelopora *Lang* Bry., Brach. 12
Coelura *Schött* Ins. 226
Coenomantis *Giglio-Tos* Ins. 223
Colastomion *Baker* Ins. 130
Collipravus *Wilson* Crust. 20
Colpichthys *Hubbs* Pisces 17
Compsodes *Hebard* Ins. 222
Consualia *Distant* Ins. 205
Cordylepalpa *Joicey & Talbot* Ins. 160
Coriandria *Tomlin* Moll. 37
Corymboporella *Lang* Bry., Brach. 12
Cosmiorrhina *Bourgoin* Ins. 98
Crateulophus *Masi* Ins. 133
Creonella *Wade* Moll. 39
Cretacechinus *Lambert & Thiéry* Echin. 14
Cribrellopsis *Koehler* Echin. 20
Cribrendoecium *Canu & Bassler* Bry., Brach. 12
Cricetiscus *Thomas* Mam. 23
Cruzia *Travassos* Verm. 20
Cryphalites *Cockerell* Ins. 112
Cryptosalius *Turner* Ins. 123
Cuphosopalpus *Pic* Ins. 105
Curiatius *Distant* Ins. 205
Curtolyprops *Pic* Ins. 103
Cyamidia *Lambert & Thiery* Echin. 14
Cyanopsis *Townsend* Ins. 195
Cynothrissa *Regan* Pisces 13
Cyphoderopsis *Carpenter* Ins. 226
Cystisella *Canu & Bassler* Bry., Brach. 12
Cystophora *Yabe & Hayasaka* Coel. 9
Cyrtillus *Aurivillius* Ins. 114

Dacnitoides *Ward & Magath* Verm. 20
Dacryonella *Canu & Bassler* Bry., Brach. 12
Dactylopopillia *Arrow* Ins. 97
Dacymba *Jordan & Hubbs* Pisces 17
Dakoticancer *Rathbun* Crust. 14
Daradaxoides *Distant* Ins. 205
Dartia *Soar* Arachn. 19
Dasycorsa *Prout* Ins. 165
Daubania *Scott* Ins. 119
Dauciscala *de Boury* Moll. 39
Deferundata *Distant* Ins. 206
Dellamora *Normand* Ins. 107
Delomys *Thomas* Mam. 23
Deltamys *Thomas* Mam. 23
Dendrozoum *Fuchs* Coel. 8
Desmoulinaster *Lambert & Thiéry* Echin. 14
Desmoxya *Hallman* Por. 4
Deuteroclara *Villeneuve* Ins. 195
Devisornis *Mathews* Aves 56
Dexopollenia *Townsend* Ins. 195
Dexosarcophaga *Townsend* Ins. 195
Dialeuronomada *Quaintance & Baker* Ins. 213
Dialeuropora *Quaintance & Baker* Ins. 213
Dialeuroplata *Quaintance & Baker* Ins. 213
Diaphanomyia *Townsend* Ins. 195
Diaphragmella *Etheridge* Moll. 51

Diascepsis *Durrant* Ins. 180
Diaugasma *Melvill* Moll. 31
Didymocentrus *Aurivillius* Ins. 114
Didymosella *Canu & Bassler* Bry., Brach. 12
Diholocynips *Rohwer & Fagon* Ins. 139
Dinardopsis *Bruch* Ins. 91
Dinarmolaelaps *Masi* Ins. 134
Diomys *Thomas* Mam. 23
Dionychella *Silvestri* Ins. 226
Diplopholeos *Canu & Bassler* Bry., Brach. 12
Diplopota *Bezzi* Ins. 195
Dirhipis *Enderlein* Ins. 189
Dirphiphagus *Brèthes* Ins. 134
Disemorpha *Pic* Ins. 106
Disphaerocephalus *Cockerell* Ins. 203
Distantinia *Muir* Ins. 206
Distefania *Checchia-Rispoli* Crust. 14
Doxomeres *Meyrick* Ins. 180
Dragmacidon *Hallman* Por. 4
Dragmatella *Hallman* Por. 4
Drepanosticta *Laidlaw* Ins. 220
Duvita *Busck* Ins. 180

Ecthropsis *Brèthes* Ins. 128
Ectoplana *Kaburaki* Verm. 16
Edmontosaurus *Lambe* Rept. 11
Elachertodomyia *Girault* Ins. 134
Elaphromyia *Taylor* Ins. 191
Electrobisium *Cockerell* Arachn. 17
Electrocyrtoma *Cockerell* Ins. 192
Electrofoenus *Cockerell* Ins. 131
Eleodiomyia *Townsend* Ins. 195
Elizabetha *Schouteden* Ins. 201
Embonycha *Navás* Ins. 217
Emersonopsis *Girault* Ins. 134
Enoplostomella *Canu & Bassler* Bry., Brach. 13
Enteremna *Meyrick* Ins. 180
Enterponosia *Matsumura* Ins. 204
Entomocorus *Eigenmann* Pisces 15
Entomolepis *Eigenmann* Pisces 13
Enveja *Navás* Ins. 217
Eoscutum *Lambert* Echin. 15
Epaleura *Meyrick* Ins. 180
Epelytes *Evermann & Radcliffe* Pisces 16
Epicalotermes *Silvestri* Ins. 217
Epicyliosoma *Silvestri* Myr., Arachn. 22
Eptanytarsus *Matsumura* Ins. 189
Equirria *Distant* Ins. 206
Eremoctenia *Scott* Ins. 200
Eriaporus *Waterston* Ins. 134
Eriopreda *Jeannel* Ins. 203
Eryopsides *Douthitt* Rept. 13
Espejoia *Bürger* Prot. 28
Esperona *Navás* Ins. 185
Ethmalosa *Regan* Pisces 12
Eucecidoses *Brèthes* Ins. 181
Eucosmechinus *Lambert & Thiéry* Echin. 15
Eucrotala *Meyrick* Ins. 181
Euidiella *Townsend* Ins. 195
Eulimostraca *Bartsch* Moll. 39
Euloewiopsis *Townsend* Ins. 195
Eumoorea *Dyar* Ins. 173
Eunotomyia *Masi* Ins. 134
Euolor *Mathews* Aves 35
Euparafrontina *Brèthes* Ins. 195
Eupelmoides *Masi* Ins. 134
Eupelops *Ewing* Arachn. 17
Eupetochira *Meyrick* Ins. 181
Euphoroceropsis *Townsend* Ins. 195
Euphthiracarus *Ewing* Arachn. 17
Eupododexia *Townsend* Ins. 195
Euravinia *Townsend* Ins. 195
Eurycoenis *Bengtsson* Ins. 218
Eurymnus *Bergroth* Ins. 202
Eurytomidia *Masi* Ins. 134
Euscopoliopteryx *Townsend* Ins. 195
Eusynamphoneura *Townsend* Ins. 195
Eutetranychus *Banks* Arachn. 18
Eutheresiops *Townsend* Ins. 195
Euthlastoblatta *Hebard* Ins. 222
Exhyalella *Stebbing* Crust. 19
Exophthalmodes *Pierce* Ins. 110

Falsocamaria *Pic* Ins. 103
Falsoconopalpus *Pic* Ins. 105
Falsolaius *Pic* Ins. 100
Falsolophocnemis *Pic* Ins. 103
Falsonemostira *Pic* Ins. 106
Fascioloides *Ward* Verm. 17
Fauxulella *Pilsbry* Moll. 47
Fibulaster *Lambert & Thiéry* Echin. 15
Flabellohedybius *Pic* Ins. 100
Fletcherimyia *Townsend* Ins. 195
Floridinella *Canu & Bassler* Bry., Brach. 13
Folka *Swinhoe* Ins. 161
Fordicidia *Distant* Ins. 206
Formicilabia *Rehn & Hebard* Ins. 222
Formosemia *Matsumura* Ins. 204
Fossiger *Wasmann* Ins. 92
Fossulocephus *Pic* Ins. 139
Francoa *Del Guercio* Ins. 211
Freyellidea *Fisher* Echin. 20
Fushia *Matsumura* Ins. 211
Fusinella *Thiele* Moll. 33
Fustigerillus *Wasmann* Ins. 92

Gabrielona *Iredale* Moll. 41
Gajechinus *Lambert & Thiéry* Echin. 15
Galleristhenia *Hampson* Ins. 173
Gargariscus *Smith* Pisces 18
Garmanichthys *Eigenmann* Pisces 15
Garricola *Chamberlin* Arachn. 15

Gastropella *Canu & Bassler* Bry., Brach. 13
Geckobiella *Banks* Arachn. 18
Geniaspidius *Masi* Ins. 134
Geodiaphana *Thiele* Moll. 45
Geropaschia *Hampson* Ins. 174
Gibbostrongylium *Pic* Ins. 103
Gibrella *Navás* Ins. 186
Gigaleurodes *Quaintance & Baker* Ins. 213
Gigantotheca *Townsend* Ins. 195
Gilbertella *Turner* Ins. 123
Ginglymacarus *Ewing* Arachn. 17
Girvanaster *Spencer* Echin. 20
Glauconympha *Oberholser* Aves 53
Glaucosarcophaga *Townsend* Ins. 195
Glossura *Cockerell* Ins. 121
Glyphinaphis *Van der Goot* Ins. 211
Glyphodiscus *Fisher* Echin. 20
Gnamptonoma *Meyrick* Ins. 181
Gnathobagrus *Nichols & Griscom* Pisces 14
Gobaishia *Matsumura* Ins. 211
Gogia *Walcott* Echin. 24
Gonomyella *Alexander* Ins. 189
Gonialosa *Regan* Pisces 13
Gonimaretia *Clark* Echin. 15
Gorekia *Bergstrom* Verm. 25
Gorgosaurus *Lambe* Rept. 11
Grabauphyllum *Foerste* Coel. 10
Grammella *Canu* Bry., Brach. 13
Grammophora *Gedoelst* Verm. 21
Greenideoida *Van der Goot* Ins. 211
Griala *Navás* Ins. 186
Grypotes *Dyar* Ins. 161
Gudwana *Distant* Ins. 208
Guyia *Thomas* Mam. 23
Gyliauchen *Pilsbry* Moll. 48
Gymnonothrus *Ewing* Arachn. 17
Gyroneurella *Baker* Ins. 130

Halliella *Broun* Ins. 110
Halticorcus *Lea* Ins. 117
Hannabura *Matsumura* Ins. 211
Hapalosaris *Meyrick* Ins. 181
Haplonema *Ward & Magath* Verm. 21
Haplorhabdus *Aurivillius* Ins. 114
Hapsidopora *Lang* Bry., Brach. 13
Haringtonia *Mathews & Iredale* Aves 54
Harknessella *Reed* Brach. 5
Harpiliopsis *Borradaile* Crust. 16
Hayhurstia *Del Guercio* Ins. 211
Hedybioattalus *Pic* Ins. 100
Heligmostrongylus *Travassos* Verm. 21
Heliomantis *Giglio-Tos* Ins. 224
Hemigyroneuron *Baker* Ins. 130
Heminodus *Smith* Pisces 18
Hesperotingis *Parshley* Ins. 202
Heptaxodon *Anthony* Mam. 25
Heterectya *Hallman* Por. 4
Heterocarpoides *De Man* Crust. 16
Heterodamaeus *Ewing* Arachn. 17
Heterosphecia *Le Cerf* Ins. 148
Hexeurytoma *Dodd* Ins. 135
Hiloa *Pilsbry* Moll. 41
Hilsa *Regan* Pisces 12
Hippadenella *Canu & Bassler* Bry., Brach. 13
Hippellozoon *Canu & Bassler* Bry., Brach. 13
Hippodiplosia *Canu* Bry., Brach. 13
Hippomenella *Canu & Bassler* Bry., Brach. 13
Hippomolgus *Sars* Crust. 20
Hippoporella *Levinsen* Bry., Brach. 13
Hippozeugosella *Canu & Bassler* Bry., Brach. 13
Hirayamaia *Marumo* Ins. 174
Holacarta *Meyrick* Ins. 181
Holotachytes *Turner* Ins. 123
Homilostola *Meyrick* Ins. 181
Homopsomys *Anthony* Mam. 25
Horamella *Draudt* Ins. 154
Horioctenus *Chamberlin* Arachn. 16
Horizonetta *Oberholser* Aves 45
Hyalacme *Hesse* Moll. 38
Hybocrossa *Turner* Ins. 181
Hydropionea *Hampson* Ins. 174
Hyllus *Wade* Moll. 32
Hymenicoides *Kemp* Crust. 14
Hymenosphecia *Le Cerf* Ins. 148
Hypersymmoca *Chrétien* Ins. 181
Hypoxystis *Prout* Ins. 167
Hypselaster *Clark* Echin. 16
Hypselolampas *Clark* Echin. 16
Hypsipezum *Alluaud* Ins. 88
Hypsorinus *Chamberlin* Arachn. 15
Hyptiogastrites *Cockerell* Ins. 131
Hystatoderes *Lameere* Ins. 114
Hysterothylacium *Ward & Magath* Verm. 21

Idielliopsis *Townsend* Ins. 196
Idiospiza *Todd* Aves 57
Iguvium *Distant* Ins. 206
Iliotona *Carnochan* Ins. 93
Indocnemis *Laidlaw* Ins. 220
Inomys *Thomas* Mam. 23
Inososgenes *Broun* Ins. 110
Isolcomyrmex *Santschi* Ins. 126
Isomantis *Giglio-Tos* Ins. 224
Isophrictis *Meyrick* Ins. 181

Jacksoneuma *Brade-Birks* Myr., Arachn. 22
Jicaltepecia *Townsend* Ins. 196
Johannsenia *Guthrie* Ins. 187

Keartlandia *Mathews* Aves 56
Kellymyia *Townsend* Ins. 198 196
Kenyacus *Alluaud* Ins. 88
Kiberbius *Chamberlin* Myr., Arachn. 22
Kleidionella *Canu & Bassler* Bry., Brach 13
Kleidotomidea *Rohwer & Fagan* Ins. 139
Konjikia *Nagano* Ins. 155
Kronos *Distant* Ins. 209
Kunugia *Nagano* Ins. 155
Kymella *Canu & Bassler* Bry., Brach. 13

Labicria *Enderlein* Ins. 209
Lanicides *Hessle* Verm. 25
Laonoenia *Hallman* Por. 4
Lasiothyris *Meyrick* Ins. 178
Latiblatetella *Hebard* Ins. 222
Larentioides *Prout* Ins. 167
Layardiella *Mathews* Aves 48
Lechrictenus *Chamberlin* Arachn. 14
Leidya *França* Prot. 26
Leiosella *Canu & Bassler* Bry., Brach. 13
Leodamus *Masi* Ins. 135
Lepraliella *Levinsen* Bry., Brach. 13
Leptacanthaspis *Jeannel* Ins. 203
Leptaegeria *Le Cerf* Ins. 149
Leptolepis *Ley* Ins. 96
Leptonemobius *Sjöstedt* Ins. 225
Leptosemia *Matsumura* Ins. 205
Leptotipula *Alexander* Ins. 189
Leucodrepanilla *Nagano* Ins. 155
Limentinus *Distant* Ins. 209
Limnohalacarus *Walter* Arachn. 19
Limnothrissa *Regan* Pisces 13
Liocalymene *Raymond* Arachn. 5
Liopagus *Chamberlin* Arachn. 17
Lissadoretus *Arrow* Ins. 97
Litocosmia *Hebard* Ins. 222
Loboa *von Ihering* Moll. 48
Lobothelphusa *Bouvier* Crust. 14
Loimos *MacCallum* Verm. 17
Longiunguis *Van der Goot* Ins. 211
Lophocera *Kenrick* Ins. 174
Lophomops *Allen* Mam. 20
Lorymodes *Hampson* Ins. 174
Losbanyosia *Muir* Ins. 206
Lovellona *Iredale* Moll. 31
Loxomima *Draudt* Ins. 155
Loxotegopsis *Dyar* Ins. 174
Lychnopsis *Vidal* Moll. 46
Lysippides *Hessle* Verm. 26

Macchiatiella *Del Guercio* Ins. 211
Maclennania *Mathews* Aves 54
Macrogrotea *Bréthes* Ins. 129
Macrosiphonerhis *Chapman* Aves 49
Macrotarsipodes *Le Cerf* Ins. 149
Macrostomoniella *Baker* Ins. 130
Macrotrotomma *Pic* Ins. 107
Mahencyrtus *Masi* Ins. 135
Mahutia *Laboissière* Ins. 117
Maiestas *Distant* Ins. 209
Mallochina *Schmitz* Ins. 193
Malmella *Dognin* Ins. 155
Maltzanella *Hesse* Moll. 49
Mamersopsoides *Viets* Arachn. 19
Mannia *Prout* Ins. 167
Mansakia *Matsumura* Ins. 211
Marianornis *Mathews* Aves 41
Mastersornis *Mathews* Aves 53
Matsumurana *Distant* Ins. 209
Matutinus *Distant* Ins. 206
Maurohelix *Hesse* Moll. 50
Mayena *Iredale* Moll. 35
Mayerella *Huntsman* Crust. 19
Mediorhynchus *Cleave* Verm. 22
Megagnatha *Bolton* Ins. 221
Megalosphecia *Le Cerf* Ins. 149
Meionops *Marshall* Ins. 111
Melanaphis *Van der Goot* Ins. 211
Melanosphecia *Le Cerf* Ins. 149
Melittina *Le Cerf* Ins. 149
Melognathus *Chamberlin* Arachn. 14
Membraniporidra *Canu & Bassler* Bry., Brach. 14
Membrendoecium *Canu & Bassler* Bry., Brach. 14
Merallus *Masi* Ins. 135
Mesomyites *Cockerell* Ins. 192
Mesopeltis *Masi* Ins. 135
Mesoseces *Faura & Canu* Bry., Brach. 14
Metacamarella *Reed* Brach. 5
Metacalosoter *Masi* Ins. 135
Metalaptus *Malenotti* Ins. 135
Metalliopsis *Townsend* Ins. 196
Metaphrya *Ikeda* Prot. 28
Metaphycus *Mercet* Ins. 135
Metasphecia *Le Cerf* Ins. 149
Metoposarcophaga *Townsend* Ins. 196
Metracolposa *Canu & Bassler* Bry., Brach. 14
Metradolium *Canu & Bassler* Bry., Brach. 14
Metrocrypta *Canu & Bassler* Bry., Brach. 14
Metroperiella *Canu & Bassler* Bry., Brach. 14
Micracanthorhynchus *Travassos* Verm. 22
Micreuchilia *Pouillaude* Ins. 98
Microcarphurus *Pic* Ins. 101
Microconomorphus *Pic* Ins. 105
Microcrypturus *Chubb* Aves 40
Microgoniadera *Pic* Ins. 103
Microlygris *Prout* Ins. 168
Micromyzus *Van der Goot* Ins. 211

Microphysetica *Hampson* Ins. 174
Microryzomys *Thomas* Mam. 23
Microstomatichthys *Nichols & Griscom* Pisces 13
Microstrongylium *Pic* Ins. 103
Microvarus *Jeannel* Ins. 203
Microxylota *Jones* Ins. 193
Miltoravinia *Townsend* Ins. 196
Mimene *Joicey & Talbot* Ins. 147
Mimocastnia *Seitz* Ins. 144
Mimodacne *Bedel* Ins. 118
Mindana *Muir* Ins. 206
Miobantia *Giglio-Tos* Ins. 224
Miocora *Calvert* Ins. 220
Miyana *Fruhstorfer* Ins. 142
Monochorhynchus *Muir* Ins. 206
Monotripta *Meyrick* Ins. 182
Morpholycus *Lea* Ins. 108
Mossaoudia *Clark* Echin. 16
Muricellisis *Kükenthal* Coel. 9
Musoniola *Giglio-Tos* Ins. 224
Myosaurus *Haughton* Rept. 11
Myxactia *Villeneuve* Ins. 196

Napcia *Navás* Ins. 217
Nathrius *Brèthes* Ins. 115
Neabrolepoideus *Girault* Ins. 135
Nematalosa *Regan* Pisces 13
Nematoserica *Arrow* Ins. 96
Nemospiza *Oberholser* Aves 60
Nemostiromorpha *Pic* Ins. 106
Neoamphitrite *Hessle* Verm. 26
Neobothynotus *Wirtner* Ins. 204
Neocremastus *Cushman* Ins. 129
Neocyclokara *Muir* Ins. 207
Neodendrokara *Muir* Ins. 207
Neodimmockia *Dodd* Ins. 135
Neogymnobates *Ewing* Arachn. 17
Neolamenia *Muir* Ins. 207
Neoleprea *Hessle* Verm. 26
Neomyzus *Van der Goot* Ins. 211
Neopastis *Meyrick* Ins. 182
Neopius *Gahan* Ins. 130
Neoprivesa *Distant* Ins. 207
Neorhizobius *Del Guercio* Ins. 212
Neorhopus *Girault* Ins. 135
Neorhyssalus *Baker* Ins. 130
Neoribatula *Ewing* Arachn. 17
Neosabellides *Hessle* Verm. 26
Neosciatheras *Masi* Ins. 135
Neosigala *Turner* Ins. 182
Neosphecia *Le Cerf* Ins. 149
Neotaxila *Fruhstorfer* Ins. 144
Neotephria *Prout* Ins. 168
Nesiotica *Turner* Ins. 156
Nesogenomorpha *Pic* Ins. 104
Neteja *Navás* Ins. 186
Neula *Navás* Ins. 186
Nicolella *Reed* Brach. 6
Nippocallis *Matsumura* Ins. 212
Nippolachnus *Matsumura* Ins. 212
Nipposiphum *Matsumura* Ins. 212
Nishiyana *Matsumura* Ins. 212
Nobiliscala *de Boury* Moll. 39
Nocaldria *Navás* Ins. 186
Nodita *Navás* Ins. 186
Nothembius *Chamberlin* Myr., Arachn. 22
Nothorestias *Muir* Ins. 207
Notochaetopsis *Townsend* Ins. 196
Notocrinus *Mortensen* Echin. 24
Notodiaphana *Thiele* Moll. 44
Notoficula *Thiele* Moll. 34
Notoglyptus *Masi* Ins. 136
Nudacotyle *Barker* Verm. 17
Nudivagus *Wade* Moll. 36
Nurudea *Matsumura* Ins. 212
Nurudeopsis *Matsumura* Ins. 212
Nycteromimus *Champion* Ins. 105
Nyctobius *Chamberlin* Myr., Arachn. 22

Oabius *Chamberlin* Myr., Arachn. 22
Obriomorpha *Aurivillius* Ins. 115
Ochetosella *Canu & Bassler* Bry., Brach. 14
Odontionella *Canu & Bassler* Bry., Brach. 14
Oedisiphum *Van der Goot* Ins. 212
Ogivalina *Canu & Bassler* Bry., Brach. 14
Oliera *Brèthes* Ins. 182
Oligomantis *Giglio-Tos* Ins. 224
Ommaleskia *Townsend* Ins. 196
Onychocnemis *Marshall* Ins. 111
Onychostruthus *Richmond* Aves 59
Operculella *Monterosato* Moll. 50
Ophiophthalmus *Matsumoto* Echin. 23
Ophiosemnotes *Matsumoto* Echin. 23
Ophiurothamnus *Matsumoto* Echin. 23
Opiconsiva *Distant* Ins. 207
Opsophasiopteryx *Townsend* Ins. 196
Opsophytopsis *Townsend* Ins. 196
Orbitestella *Iredale* Moll. 42
Orchamus *Quaintance & Baker* Ins. 213
Orchoporus *Lambert & Thièry* Echin. 17
Oridia *Rioja* Verm. 26
Orinocosa *Chamberlin* Arachn. 16
Orinomus *Chamberlin* Arachn. 14
Orinophonus *Alluaud* Ins. 89
Orionastraea *Smith* Coel. 10
Orolestes *Thomas* Mam. 28
Oromantis *Giglio-Tos* Ins. 224
Orosiotes *Nishima* Ins. 113
Osminia *Le Cerf* Ins. 149
Osmocnema *Draudt* Ins. 156
Oswaldocruzia *Travassos* Verm. 21
Otionella *Canu & Bassler* Bry., Brach., 14

Otopsis *Ditlevsen* Verm. 26
Oturovana *Reitter* Ins. 94
Oxnerella *Dobell* Prot. 23
Oxyadoretus *Arrow* Ins. 97
Oxyclypeina *Lambert & Thiéry* Echin. 17
Oxyelaea *Giglio-Tos* Ins. 224
Oxylechia *Meyrick* Ins. 183
Oxyophthalmellus *Giglio-Tos* Ins. 224
Oxyrhynchaxius *Parisi* Crust. 15
Oxysarcodexia *Townsend* Ins. 196
Oxythaphora *Dyar* Ins. 162

Pachybela *Turner* Ins. 183
Pachyloidellus *Müller* Arachn. 17
Pachysandalus *Jeannel* Ins. 203
Paganalia *Distant* Ins. 209
Pagobius *Chamberlin* Myr., Arachn. 22
Pagodinella *Thiele* Moll. 48
Palaeochiropteryx *Revilliod* Mam. 20
Palaeoglandina *Wenz* Moll. 44
Palaeomantis *Bolton* Ins. 221
Palaeophyllophora *Revilliod* Mam. 19
Paliger *Wasmann* Ins. 92
Pannonia *Pallary* Moll. 37
Paobius *Chamberlin* Myr., Arachn. 22
Parabagous *Sharp* Ins. 111
Parabalaenanemertes *Brinkmann* Verm. 19
Parablastothrix *Mercet* Ins. 136
Paraboysidia *Pilsbry* Moll., 48
Parachrysocharis *Girault* Ins. 136
Paractocharis *Cameron* Ins. 91
Paradinia *Draudt* Ins. 156
Parafundulus *Eastman* Pisces 16
Parageniaspis *Masi* Ins. 136
Paragyroneuron *Baker* Ins. 131
Parakosalya *Distant* Ins. 207
Paraliburnia *Jensen-Haarup* Ins. 207
Paramevania *Draudt* Ins. 156
Paramorea *Wade* Moll. 34
Paramyiocnema *Girault* Ins. 136
Paranastatus *Masi* Ins. 136
Paranepanthia *Fisher* Echin. 21
Paraphaenops *Jeannel* Ins. 89
Paraphasiopsis *Townsend* Ins. 196
Paraphytosus *Cameron* Ins. 91
Paraptica *Meyrick* Ins. 183
Pararoubaudia *Villeneuve* Ins. 196
Parasarcodexia *Townsend* Ins. 196
Parasciatheras *Masi* Ins. 136
Parasesia *Le Cerf* Ins. 149
Paratactopsis *Townsend* Ins. 196
Parathyris *Douvillé* Brach. 6
Paratimea *Hallman* Por. 4
Paratinanthus *Lambert & Thiéry* Echin. 17
Parcoblatta *Hebard* Ins. 223
Pardalis *Travassos* Verm. 22
Paressisus *Aurivillius* Ins. 115
Paridris *Brèthes* Ins. 138
Parochmastis *Meyrick* Ins. 183
Parodomyia *Townsend* Ins. 196
Pauronychella *Silvestri* Ins. 226
Pectinophora *Busck* Ins. 183
Pedrilliomorpha *Pic* Ins. 117
Pelagorhynchus *Pavillard* Prot. 27
Peltopyga *Townsend* Ins. 196
Peltostega *Wiman* Rept. 13
Peltotrachelus *Marshall* Ins. 111
Pemphigonotus *Lamb* Ins. 199
Pengalenganus *Pic* Ins. 103
Pentatomophaga *de Meyere* Ins. 196
Perigastrella *Canu & Bassler* Bry., Brach. 14
Peripandalus *De Man* Crust. 16
Periporosella *Canu & Bassler* Bry., Brach. 14
Perissolalage *Oberholser* Aves 53
Perixestis *Meyrick* Ins. 183
Phaenomys *Thomas* Mam. 24
Phaeorhadina *Mathews & Iredale* Aves 56
Phelsumaster *Lambert & Thiéry* Echin. 17
Philandia *Germain & Kerremans* Ins. 99
Philaristis *Meyrick* Ins. 183
Philodamus *Quaintance & Baker* Ins. 213
Philosina *Ris* Ins. 220
Phlaebarodes *Giglio-Tos* Ins. 224
Phormiobius *Broun* Ins. 92
Phractoporella *Lang* Bry., Brach. 14
Phryganomima *Hampson* Ins. 175
Phycitodes *Hampson* Ins. 175
Phymotaxis *Lambert & Thiéry* Echin. 17
Physalidicola *Brèthes* Ins. 187
Physciomorphus *Pic* Ins. 105
Phyzanica *Turner* Ins. 183
Pickworthia *Iredale* Moll. 42
Pictoscala *Dall* Moll. 39
Pierogenes *Meyrick* Ins. 183
Pionatax *Viets* Arachn. 19
Plaeocarria *Cockerell* Ins. 221
Plagiosmittia *Canu & Bassler* Bry., Brach. 14
Platyclypeina *Lambert & Thiéry* Echin. 17
Platycraniellus *Hoepen* Rept. 12
Platylimnobia *Alexander* Ins. 190
Platyrhopalides *Wasmann* Ins. 90
Playfairia *Reed* Brach. 6
Plecophlebus *Cockerell* Ins. 185
Plethotaenia *Clark* Echin. 17
Plutopaschia *Hampson* Ins. 176
Pneumobites *Ward* Verm. 18
Pnigomantis *Giglio-Tos* Ins. 224
Podochirus *Schwartz* Crust. 19
Podoclepsis *Dequal* Verm. 28

Poecilothrissa *Regan* Pisces 13
Poecilurus *Todd* Aves 51
Poikilosakos *Watson* Brach. 6
Polleniopsis *Townsend* Ins. 197
Polyeucta *Turner* Ins. 183
Polystomoides *Ward* Verm. 18
Polythecalis *Yabe & Hayasaka* Coel. 10
Polythore *Calvert* Ins. 220
Polytsrasaurus *Haughton* Rept. 11
Pontonides *Borradaile* Crust. 16
Porinula *Levinsen* Bry., Brach. 14
Potamothrissa *Regan* Pisces 13
Potniarcha *Meyrick* Ins. 183
Praetaxila *Fruhstorfer* Ins. 144
Premelittia *Le Cerf* Ins. 149
Primerenca *Navás* Ins. 185
Privesana *Distant* Ins. 207
Proaegeria *Le Cerf* Ins. 149
Probagous *Sharp* Ins. 112
Probalaenanemertes *Brinkmann* Verm. 19
Proctocopis *Draudt* Ins. 157
Procyliosoma *Silvestri* Myr., Arachn. 23
Propachyneuronia *Girault* Ins. 136
Propachytomoides *Girault* Ins. 136
Prosopophorella *de Meyere* Ins. 199
Prosthetocirca *Townsend* Ins. 197
Protarchyntis *Meyrick* Ins. 183
Protofoenus *Cockerell* Ins. 131
Protoscinis *Cockerell* Ins. 199
Prototheora *Meyrick* Ins. 177
Pseudalcathoe *Le Cerf* Ins. 149
Pseudanastatus *Masi* Ins. 136
Pseudobagous *Sharp* Ins. 112
Pseudoblapida *Pic* Ins. 104
Pseudocryphalus *Swaine* Ins. 113
Pseudodiscoides *Lambert & Thiéry* Echin. 17
Pseudoechthistatus *Pic* Ins. 115
Pseudofigulina *Hesse* Moll. 50
Pseudogyroneuron *Baker* Ins. 131
Pseudoheterakis *Travassos* Verm. 22
Pseudohylesinus *Swaine* Ins. 113
Pseudomikiola *Brèthes* Ins. 187
Pseudolagria *Champion* Ins. 106
Pseudoleacina *Wenz* Moll. 45
Pseudomaenas *Prout* Ins. 169
Pseudomelittia *Le Cerf* Ins. 149
Pseudomesalia *Douvillé* Moll. 36
Pseudophidiaster *Clark* Echin. 21
Pseudoplites *Lameere* Ins. 115
Pseudotadorna *Kuroda* Aves 45
Pseudotachinomyia *Smith* Ins. 197
Psychomantis *Giglio-Tos* Ins. 224
Ptilogenes *Meyrick* Ins. 183
Puranoides *Moulton* Ins. 205
Pycnothele *Chamberlin* Arachn. 14
Pycnozancla *Turner* Ins. 183
Pygospermophagus *Pic* Ins. 116
Pyncostola *Meyrick* Ins. 183

Quechuella *Chamberlin* Arachn. 16

Rabdostigma *Quaintance & Baker* Ins. 213
Rachidiscodes *Broun* Ins. 112
Rafaelia *Townsend* Ins. 197
Raimondia *Townsend* Ins. 197
Raphidechinus *Lambert & Thiéry* Echin. 17
Raviniopsis *Townsend* Ins. 197
Recicolus *Jeannel* Ins. 203
Rectonychocella *Canu & Bassler* Bry., Brach. 14
Rensselaerina *Dunbar* Brach. 7.
Reynellona *Iredale* Moll. 42
Rhachisphora *Quaintance & Baker* Ins. 213
Rhagomys *Thomas* Mam. 24
Rhaphoxya *Hallman* Por. 4
Rheomantis *Giglio-Tos* Ins. 224
Rhinophoracarus *Viets* Arachn. 19
Rhodacmea *Walker* Moll. 49
Rhodocephala *Walker* Moll. 49
Rhodomantis *Giglio-Tos* Ins. 224
Rhogasella *Baker* Ins. 131
Rhomantis *Giglio-Tos* Ins. 224
Rhottonia *Murphy* Aves 43
Rhumbleria *Bürger* Prot. 23
Rhynchomyiopsis *Townsend* Ins. 197
Ridiaschina *Brèthes* Ins. 183
Rileyopsis *Bergevin* Ins. 207
Rispolia *Lambert* Echin. 17
Rooseveltia *Fox* Ins. 200
Rondanioestrus *Villeneuve* Ins. 194
Rondoletia *Naef* Moll. 59
Rotulechinus *Lambert & Thiéry* Echin. 18
Rouleophis *Chabanaud* Rept. 11
Rusostigma *Quaintance & Baker* Ins. 213

Salvaza *Navás* Ins. 186
Samlandaster *Lambert* Echin. 18
Sankisia *Schouteden* Ins. 202
Saraceniomyia *Townsend* Ins. 197
Sarcodexiopsis *Townsend* Ins. 197
Sarcophodexia *Townsend* Ins. 197
Sarothromyiops *Townsend* Ins. 197
Sasakiella *Okubo* Coel. 8
Sauromys *Roberts* Mam. 20
Scaeotes *Durrant* Ins. 184
Scarabaeophaga *Townsend* Ins. 197
Scepasma *Enderlein* Ins. 190
Schizadoretus *Arrow* Ins. 97
Schizaropsis *Canu & Bassler* Bry., Brach. 15
Schizella *Bezzi* Ins. 192
Schizellozoon *Canu & Bassler* Bry., Brach. 15

Schizemiella *Canu & Bassler* Bry., Brach. 15
Schizobathysella *Canu & Bassler* Bry., Brach. 15
Schizobodo *Chatton* Prot. 27
Schizomavella *Canu & Bassler* Bry., Brach. 15
Schizoneuraphis *Van der Goot* Ins. 212
Schizophorella *Reed* Brach. 7
Schizopodrella *Canu & Bassler* Bry., Brach. 15
Schizorthosecos *Canu & Bassler* Bry., Brach. 15
Schoenobiodes *Hampson* Ins. 176
Sciatherellus *Masi* Ins. 136
Scleronema *Eigenmann* Pisces 15
Scobina *Wade* Moll. 32
Scotteus *Masi* Ins. 136
Segregara *Tucker* Arachn. 14
Selenoritus *Alluaud* Ins. 89
Selysina *Duboscq* Prot. 24
Semihaswellia *Canu & Bassler* Bry., Brach. 15
Seminola *Wade* Moll. 34
Senzilla *Navás* Ins. 218
Serrataphis *Van der Goot* Ins. 212
Serropalpimorpha *Pic* Ins. 105
Serropalpolycus *Pic* Ins. 105
Setaphis *Van der Goot* Ins. 212
Shafferia *Walcott* Crust. 19
Sherbornia *Iredale* Moll. 36
Silisoptinus *Pic* Ins. 102
Sindonophora *Meyrick* Ins. 184
Skiapus *Morley* Ins. 129
Soldanellonyx *Walter* Arachn. 19
Sosanopsis *Hessle* Verm. 27
Spalangiolaelaps *Girault* Ins. 137
Speleoplectus *Minozzi* Ins. 92
Sphegigastrella *Masi* Ins. 137
Sphindocis *Fall* Ins. 102
Spinolyprops *Pic* Ins. 104
Spinosphaera *Hessle* Verm. 27
Spirobolomyia *Townsend* Ins. 197
Stamenocella *Canu & Bassler* Bry., Brach. 15
Stauromantis *Giglio-Tos* Ins. 225
Steganacarus *Ewing* Aracyn. 17
Stenelachistus *Masi* Ins. 137
Stenorhopalus *Wasmann* Ins. 90
Stenosphecia *Le Cerf* Ins. 149
Stenostreptus *Carl* Myr., Arachn. 23
Stenurostreptus *Carl* Myr., Arachn. 23
Stephanosella *Canu & Bassler* Bry., Brach. 15
Stereoptila *Meyrick* Ins. 184
Stictiella *Parker* Ins. 125
Stictodrya *Champion* Ins. 105
Stigmaeopsis *Banks* Arachn. 18
Stolothrissa *Regan* Pisces 13
Stomachetosella *Canu & Bassler* Bry., Brach. 15
Stomacoccus *Ferris* Ins. 215
Strogylocephala *Crawford* Ins. 210
Strongylamma *Hallman* Por. 4
Struthiomimus *Osborn* Rept. 11
Suavipsitta *Mathews* Aves 47
Subaturus *Viets* Arachn. 19
Subdysmorphorhynchus *Kleine* Ins. 113
Suberiopsis *Broch* Coel. 9
Suborychodes *Kleine* Ins. 113
Sycopteron *Bolton* Ins. 186
Sycosoter *Picard & Lichtenstein* Ins. 131
Symphycus *Masi* Ins. 137
Synactia *Villeneuve* Ins. 197
Synamphoneuropsis *Townsend* Ins. 197
Synchalara *Meyrick* Ins. 184
Syncoptozus *Enderlein* Ins. 210
Syncyliosoma *Silvestri* Myr. Arachn. 23
Synhoplos *Lamb* Ins. 200
Synisoma *Collinge* Crust. 18
Synochitis *Lambert* Echin. 18
Synodontomys *Allen* Mam. 25
Synsynella *Hay* Crust. 18
Synthemiopsis *Tillyard* Ins. 220
Syringosoma *Townsend* Ins. 198
Systegnum *Enderlein* Ins. 191
Systellogaster *Gahan* Ins. 137
Systellus *Kleine* Ins. 113

Tachinaephagus *Girault* Ins. 137
Taeniaphora *Kenrick* Ins. 177
Taeniurites *Cockerell* Ins. 140
Taiwanosemia *Matsumura* Ins. 205
Takanea *Nagano* Ins. 158
Takecallis *Matsumura* Ins. 212
Tanaorhamphus *Ward* Verm. 22
Tanypteryx *Kennedy* Ins. 220
Tarachodella *Giglio-Tos* Ins. 225
Tarachodula *Giglio-Tos* Ins. 225
Taterona *Wroughton* Mam. 24
Taumantis *Giglio-Tos* Ins. 225
Tauromantis *Giglio-Tos* Ins. 225
Tecupa *Swinhoe* Ins. 148
Tegoribates *Ewing* Arachn. 17
Teleosphecia *Le Cerf* Ins. 150
Telmatactis *Gravier* Coel. 10
Teluropus *Marshall* Ins. 112
Tembandumba *Distant* Ins. 208
Temnodiscus *Lambert* Echin. 18
Tephomyiella *Townsend* Ins. 198
Tetralicia *Harrison* Ins. 213
Tetrancistrum *Goto & Kikuchi* Verm. 18
Tetranobia *Banks* Arachn. 18
Tetranychina *Banks* Arachn. 18
Thalerostoma *Meyrick* Ins. 184
Thamboceras *Douvillé* Moll. 59
Thaumastonyx *Alluaud* Ins. 89
Thauritens *Pavillard* Prot. 28
Theomantis *Giglio-Tos* Ins. 225

Theopompella *Giglio-Tos* Ins. 225
Theopompula *Giglio-Tos* Ins. 225
Theresea *Pic* Ins. 104
Thibetia *Joicey & Kaye* Ins. 150
Tholeopelta *Lambert & Thiéry* Echin. 18
Thoracaphis *Van der Goot* Ins. 212
Thripsaphis *Gillette* Ins. 212
Thylepticocnema *Townsend* Ins. 198
Thyrinops *Hubbs* Pisces 17
Thyromorpha *Turner* Ins. 184
Thyrospiza *Oberholser* Aves 60
Thysanopsis *Townsend* Ins. 198
Tigobius *Chamberlin* Myr., Arachn. 22
Tilithemis *Sjöstedt* Ins. 220
Tillopsis *Berlioz* Ins. 118
Tisma *Giglio-Tos* Ins. 225
Titanogrypa *Townsend* Ins. 198
Titanoides *Gidley* Mam. 27
Todolachnus *Matsumura* Ins. 213
Tournoueraster *Lambert* Echin. 18
Toxemma *Hallman* Por. 4
Trachymantis *Giglio-Tos* Ins. 225
Trachyzancla *Turner* Ins. 184
Transculicia *Dyar* Ins. 189
Trematoichos *Canu & Bassler* Bry., Brach. 15
Tricercomonas *Wenyon & O'Connor* Prot. 27
Trichanomala *Arrow* Ins. 97
Trichaphaenops *Jeannel* Ins. 90
Trichinochaeta *Townsend* Ins. 198
Trichobaptria *Prout* Ins. 170
Trichodolichopeza *Alexander* Ins. 190
Trichometallea *Townsend* Ins. 198
Trichotriura *Silvestri* Ins. 226
Trifur *Wilson* Crust. 21
Triphyllozoon *Canu & Bassler* Bry., Brach. 15
Triporobius *Chamberlin* Myr., Arachn. 22
Tripselia *Scott* Ins. 200
Trisoleniella *Rohwer & Fagan* Ins. 139
Trisphaera *Vinassa* Prot. 23
Trixosarcophaga *Townsend* Ins. 198
Trochiloleskia *Townsend* Ins. 198
Tropacarus *Ewing* Arachn. 17
Trophodiscus *Fisher* Echin. 22
Tropicoritus *Alluaud* Ins. 90
Tubucella *Canu & Bassler* Bry., Brach. 15
Tulaeopoda *Townsend* Ins. 198
Tunabo *Chamberlin* Arachn. 16
Tutaibo *Chamberlin* Arachn. 15
Tylopora *Lang* Bry., Brach. 15
Tylopterna *Bezzi* Ins. 200
Tylotia *Melvill* Moll. 32
Ugartea *Bartsch* Moll. 41
Umbelusia *Townsend* Ins. 198
Uranocentrodon *Hoepen* Rept. 13
Uraphis *Del Guercio* Ins. 213
Urocopia *Sars* Crust. 21
Uromantis *Giglio-Tos* Ins. 225
Urortalis *Cockerell* Ins. 200

Velumella *Canu & Bassler* Bry., Brach. 15
Ventriculus *Wenz* Moll. 38
Veprecula *Melvill* Moll. 32
Verdunia *Mercet* Ins. 138
Veromessor *Forel* Ins. 127
Vespanthedon *Le Cerf* Ins. 150
Vetofistula *Etheridge* Bry., Brach. 15
Vibracellina *Canu & Bassler* Bry., Brach. 15
Vizcaya *Muir* Ins. 208
Volcanalia *Distant* Ins. 208

Wailamyctes *Archey* Myr., Arachn. 22
Waskia *Wenyon & O'Connor* Prot. 27
Watabura *Matsumura* Ins. 213
Wilderia *Pratt* Verm. 18
Willowsia *Shoebotham* Ins. 227
Wohlfartiopsis *Townsend* Ins. 198
Wunderia *Grossbeck* Ins. 177
Wuria *Viets* Arachn. 19

Xantharete *Draudt* Ins. 159
Xenanusia *Girault* Ins. 138
Xenoscarus *Evermann & Radcliffe* Pisces 17
Xerocrates *Meyrick* Ins. 184
Xygographa *Meyrick* Ins. 184

Yamataphis *Matsumura* Ins. 213
Yamatocallis *Matsumura* Ins. 213
Yezabura *Matsumura* Ins. 213
Yezaphis *Matsumura* Ins. 213
Yezocallis *Matsumura* Ins. 213
Yezoterpnosia *Matsumura* Ins. 205

Zanclidia *Prout* Ins. 171
Zaommoencyrtus *Girault* Ins. 138
Zarax *Fruhstorfer* Ins. 144
Zeagyrtes *Broun* Ins. 93
Zenocolon *Broun* Ins. 93
Zonagrion *Kennedy* Ins. 220
Zuffardia *Checchia-Rispoli* Echin. 18
Zygastropyga *Townsend* Ins. 198
Zygocotyle *Stunkard* Verm. 18